FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

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Illinois Issues New Regulations on Stilbestrol Feeds

CHICAGO—New Illinois state regulations governing feeds containing diethylstilbestrol go into effect Jan. 16.

In mid-December, the Illinois Division of Foods, Dairies and Standards sent out a notice concerning regulations for stilbestrol feeds to be effective Jan. 1.

However, as noted in a recent bulletin from the American Feed Manufacturers Assn., there was considerable objection on the part of both feeders and the feed industry concerning certain restrictions, particularly regarding the necessity of pelleting and the prohibition of deliveries in bulk.

A conference then was held between Illinois officials and the industry, and as a result, the regulations were modified and revised.

Following are the revised regulations, which were made officially effective as of Jan. 16:

1. Diethylstilbestrol is to be included only in those feed supplements used to fatten cattle after they have attained a weight of at least 600 lb., provided such beef cattle are to be slaughtered.

2. Diethylstilbestrol is not per-

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Aid to Livestock Men Seen in Plan

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Secretary Benson Questioned On Proposed Farm Program

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—Appearing before the Senate Agriculture Committee this week, Ezra Taft Benson, secretary of agriculture, outlined the new farm program along much the same lines as given in the President's farm message.

The secretary filled in some of the more general spots of the White House message, but he was unable to provide detailed information on some of the vital matters of the soil bank part of the program.

(See stories on page 3 for more details on the farm program proposal.)

Probably the most penetrating and constructive questioning came from Sen. Clinton P. Anderson (D., N.M.), who developed the point that even if the Benson goals were to be accomplished—and Sen. Anderson expressed doubt that they could be on a voluntary basis—the program would not bring down new crop production to a level where out-of-storage movement of surplus would be larger than the new crop outturn. Sen. Anderson made this point as he cited the snowballing surpluses of cotton despite vigorous export sales efforts and tightened production controls.

Said to Be Insufficient

This criticism of the administration soil bank program had previously been told privately to this reporter by Republican farm leaders who estimated that the amount of new funds which would be made available under the soil bank program could not remove a sufficient quantity of crop land from the basic acreage allotment crops to effect an adequate cut in over-all production.

For wheat and cotton, for example, the secretary would take out approximately 20% in addition to acreage allotment deduction. According to one congressional leader, this reduction in acreage probably would result in only a 10% drop in output.

Not Enough Seed

Another astonishing disclosure from other points in USDA revealed that even if the administration plan to remove approximately 40 million acres of land from field crops—wheat, cotton, corn and rice — succeeded, there would not be enough seed stock available to provide the cover crops now being asked for this land.

Not only is there an over-all shortage of seed, there are acute shortages of certain seed types which would be in hot demand for some of the areas where the soil bank proposal would be widely operative.

It is speculated within USDA now

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New Program Would Help Prevent Excess Output, Officials Say

WASHINGTON — Administration officials say that the proposed new farm program and "soil bank" plan hold special significance for livestock producers.

In his message to Congress, the President said: "Establishment of the soil bank will alleviate the undue stimulus to livestock production and the resulting downward pressure on livestock prices which arise from using for feed-grain production much of the acreage already diverted from wheat and cotton.

"Restrictions against grazing the soil bank acres will safeguard the interests of beef producers and dairymen."

(See stories on this page and page 3 for other details on farm program proposals.)

The President also said that, in periods of glutted livestock markets, the government would be ready with purchase and diversion programs to bolster prices.

At the same time, he reported that the pork purchase program now in progress would be stepped up to supply expanded outlets. He also said special programs, such as emergency credit and low cost feed in event of drouth, will be available when disaster strikes.

The President went on to urge increased research on nutrition, disease control and breeding.

Meanwhile, Ezra Taft Benson, secretary of agriculture, discussed the proposed farm program in a talk before the American National Cattlemen's Assn. in New Orleans.

Noting the surplus problem, he said that acres diverted from wheat and cotton have been shifted into

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Grain Trade Organizes to Protest Railroad Rate Hike

CHICAGO—An aggressive fight to prevent the railroads from putting into effect a 7% increase in freight rates is expected from the grain and milling trade following a meeting Jan. 11 of shipping and marketing representatives.

Another meeting has been scheduled for Jan. 23 at Chicago when the positions of all interested parties will be coordinated so that verified statements may be presented to the Interstate Commerce Commission by Feb. 3.

From the Jan. 11 meeting came agreement that a position of vigorous opposition to the 7% increase in rates and charges contained in Tariff X-196 should be taken, with a specific request for suspension of the increase as it would apply to grain, grain products and related articles.

The grain shipping and marketing interests not only object to the planned rate hike, but they also are opposed to the "short-cut" plan being used by the railroads to put it into effect.

The usual procedure employed by carriers in the past, when seeking general rate increases, was to file a petition with the Interstate Commerce Commission seeking authority to modify certain outstanding decisions so that rates could be increased by a certain percent.

The ICC then set the matter down for a series of hearings. But the carriers complained that the long delays involved from this procedure caused them serious monetary losses each day of delay in putting the new rates in effect.

The railroads want to make the proposed increase effective Feb. 9, but later changed this date to Feb. 25 after the chairman of the ICC held the time schedule was "clearly inadequate."

They want to have the hearings held after the new rates become effective, with the pledge that they will make refunds if the increase is eventually rejected or scaled down by the ICC.

The grain trade contends that this is an "improper procedure."

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Reasons Given for Boost in Soybean, Flaxseed Supports

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Ezra Taft Benson, secretary of agriculture, this week gave an explanation for the contemplated boost in the price support level for soybeans and flaxseed.

In his appearance before the Senate Agriculture committee, Mr. Benson said that the planned support increase —announced in the President's farm message—is necessary to maintain an adequate supply of oilseed protein.

In other quarters of the U.S. Department of Agriculture, it was further explained that deeper reductions in cotton acreage, plus an anticipated reduction in the pig crop, would reduce edible fat supplies and that soybeans, still selling above support levels, provide an opportunity to sustain adequate vegetable protein supplies.

It may be expected that the support advance for the 1956 soybean crop will set the support level at 75% of parity.

Meanwhile, it was learned in official circles that the White House farm message was written without consultation with Commodity Stabilization Service officials and that they were taken by surprise with the decision to boost the support level this year for flaxseed and soybeans.

The USDA part in the White House message was attributed largely to Don Paarlberg, economic advisor on the Benson staff, and True D. Morse, under secretary of agriculture.

Reaction among a number of observers was that the oilseed support boost is an attempt to put the Benson front office team in good graces with the oilseed state politicians in Congress.

Economic Reasons

But other sources close to the Paarlberg-Morse team explain the

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EDITORIAL STAFF—Harvey E. Yantis, Editor; Milton B. Kihlstrum, Managing Editor; Martin E. Newell, Paul L. Dittemore, Associate Editors; Roger Berglund, News Editor; George L. Gates, Market Editor; Frank W. Cooley, Jr., Emmet J. Hoffman, Editorial Assistants; L. R. McDonald, Research Director.

WASHINGTON REPRESENTATIVE—John Cipperly, 604 Hibbs Building, Washington, D. C., Telephone, Republic 7-8534.

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A Changing Pattern

SOME comments published in Feedstuffs a few weeks ago, in this department as well as under our Washington correspondent's by-line, had to do with changes in farming practices. The principal point made was that mechanization, increasing use of plant foods and other agricultural chemicals, freezing and other forms of food preservation—all are making steady, even rapid, progress in farming communities. A comparison was drawn with the industrial revolution that has occurred in manufacturing fields within the past half century. The changes in farming are aimed at obtaining more economical production with less work, just as the industrial revolution was aimed at those objectives. Almost all of these devices demand large scale operations to reach their greatest effectiveness, and this requirement is altering and will continue to alter the methods through which a successful farming operation can be conducted. It is also changing and will continue to change the industries and businesses serving agriculture, such as the feed business.

The line of thinking propounded in the Feedstuffs' articles has attracted an unusual amount of interest and discussion. A number of feed industry leaders have expressed agreement that we are undergoing a revolution in agriculture that cannot be stopped by political or similar means, and that recognition of this is essential in any planning of those in the agricultural service industries.

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WE recently came across a related discussion in the Industrial Bulletin of Arthur D. Little, Inc., research and engineering consultants. This dealt particularly with the impact of efficient and economical refrigeration on farming. Many realize what the improvement in refrigeration has meant to consumers and the food industry, but we believe that far fewer persons have recognized the effect on agricultural production.

The biggest expansion has been in the development of distribution channels, particularly storage facilities to hold goods at 0° F. There are now over 225 million cubic feet of such low-temperature warehouse capacity, capable of holding two years' frozen food production at the present rate of output. Low-temperature transportation has also been influenced by the needs of the frozen food industry. The handling of perishables by fast truck has increased greatly, and mechanically-refrigerated railroad cars have been developed. These are more costly than the ice-bunker type, but can hold the low temperatures required.

Departing from the frozen food specialty store of the immediate postwar period, the industry has concentrated on the traditional outlet—the grocery store. Some 250,000 retail stores have frozen-food departments; 75% of the industry's output is sold through supermarkets. Frozen packaging has contributed substantially to supermarket merchandising methods, and has spearheaded the trend toward unit packaging of fresh meat and vegetables.

A revolution has also taken place in food production and harvesting, with greater emphasis on quality and the ability to maintain this quality in storage, production at the farm level has changed considerably. The most outstanding example is the Florida orange-crop, 85% of which now leaves the state as other than whole fruit. Frozen orange juice concentrate, introduced in 1948, now takes 47% of the crop, with bottling for sale by milk companies and canning taking much of the rest. In general, traditional farming, with crops staggered to meet market demand, has been replaced by farms of thousands of acres, operated as highly efficient, mechanized "food factories" with harvests geared to freezing and packing facilities. Freezing now takes 45% of the strawberry and broccoli crops, 37% of the spinach and 60% of the lima beans.

"Red" meats do not yet figure largely in the frozen foods industry, but 200 million pounds of meat, 525 million pounds of poultry (not classified as meat by the industry and 450 million pounds of fish accounted for a substantial portion of 1954's four-billion-pound total pack. In addition, "heat and eat" foods are growing; down to five million pounds in 1947, they climbed to 60 million by 1950, and to 425 million by 1954. A 41% increase is expected for 1955. Fish sticks have been important to the growth of pre-cooked foods; sales in 1953 were seven and a half million pounds, grew to 50 million in 1954 and were expected to reach 75 million in 1955. A ham stick has recently been introduced with promising results. Chicken, turkey, and beef pies have also contributed substantially to the growth of precooked foods.

With over 1,300 packers offering more than 700 items, competition among frozen foods is intense. As the battle for limited retail display space continues, many small firms are losing ground, while dominant brands are emerging to control the market and command a premium price. The substantial investment required for refrigerated storage and display cabinets has proved well worth while, yet the industry estimates it may lose some $300 million in sales because of lack of cabinet space in retail outlets.

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PACKERS are encouraging retailers to expand and improve refrigerated facilities. Too often a retailer may store frozen food in an open back room for several hours before putting it in the display freezer. Even use of a meat cooler (36 to 42° F.) for temporary holding, a fairly common practice, results in thawing and loss of flavor. At least one state has passed legislation to regulate handling of frozen food. Informed distributors are in favor of the program, and are taking steps to conform with the proposed regulations.

The hint that irradiated foods may come on the market before long and completely wipe out freezing seems to be without strong backing. While considerable progress is being made in sterilization of food by this technique, the problems to be solved are sufficiently complex to require several years' work. Meanwhile, several new developments, including the coating of frozen meats with wax for easier distribution and lower handling costs, are expected to contribute heavily to continued growth for frozen foods.

All of these things have a direct and important bearing on the feed industry. They encourage the large, efficient, specialist type of farm operation. They encourage continued expansion of the production and consumption of meat, milk and eggs, but through procedures and methods that will make it increasingly difficult for the so-called family farm—the "barnyard flock"—type of operator to stay in business. The feed industry must be cognizant of these changing patterns, and adjust its own operations to them.

A FEEDSTUFFS FORMULA FEEDS: HOW'S BUSINESS? FEATURE

Formula feed sales showed moderate gains in some areas but remained limited in others. Indications of an early start on chick feed business appeared, and manufacturers were quite optimistic about a good year in this line. Hog feed business continues to be below usual volume, and dairy feed sales reports were mixed. Improved broiler and egg prices kept feed for these operations in good demand. The index of wholesale feedstuffs prices showed little change at 189.3 for the week ending Jan. 11, and the feed grain index advanced .6 point to 186.2. (Ingredient details on pages 74-76.)

Northwest

Feed demand held up quite well in the Northwest this week, although the bulge in buying experienced by some manufacturers last week diminished somewhat.

Manufacturers already have orders for baby chick feeds, which is unusually early for this area. With good egg prices, apparently an early start is being made in purchases for flock replacement, and manufacturers are optimistic about prospects for good feed volume in poultry feeds this year. Sales of egg feeds continue fair to good, meanwhile.

The improvement in hog feed demand reported last week turned out to be a temporary boost, as sales were back to their previously slow pace again. Dairy feed volume is slow to good, and instructions on cattle feed bookings are slow.

Operations remain on the same basis as last week, with major plants running from 1½ shifts to two extended shifts. No Saturday work was scheduled by mills which a week earlier had to employ weekend production, but backlogs are still quite good.

Southwest

A mixture of reports on feed sales came out of the Southwest this week, but in general business probably was on a slightly better trend. Prolonged drouth, continued low hog prices, large grain supplies and little stimulus in feed prices were limiting factors.

On the other hand, a better demand for broiler feeds, some initial inquiry for chick starter with the prediction of an early chick season and a pickup in interest in cattle feed lot operations helped the situation somewhat.

Mills serving the large commercial feeders reported business active this week, and some overtime was scheduled to keep shipments in line. Other companies serving mainly the rural dealers found that dealers had done a fair job of stocking immediately after the first of the year, and sales were slowing down a little this week.

Buoyed by a good broiler price of 21@23¢, feed shipments to commercial broiler feeders were in good volume this week. Laying rations also were in fairly good demand. Hog feed sales continued to lag, and there were both good and bad reports on the dairy feed business. Cattle fatteners were in better demand, while range feeds moved mainly on previous orders.

Major feed ingredients showed little change this week. Formula price lists were steady to as much as $1 ton lower. Operations were barely at five days in some instances while a few reported some overtime.

Southeast

There seems to be a little better feel to the feed market in the southeast. Sales of both formula feeds and other feeding materials are indicated to be better. Freezing weather well down into Florida has probably helped some. It is reported that this cold wave has done considerable damage to Florida crops, and the citrus pulp sellers are proceeding with the expectation that supplies of this feed can very easily become relatively tight during the near future. This could cause a firmer market.

Broiler feeds continue to move well and demand seems to be even slightly better this week. Chick placements continue to increase, which would indicate a good demand from this source. Broiler prices could be better, but lowered feed costs have helped offset declining poultry markets. Cattle feeders are still disturbed over feed ratios, but feed movement in this direction appears to be slight-

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National Alfalfa Building New Plant in Kansas

LAMAR, COLO.—National Alfalfa Dehydrating & Milling Co. has announced the start on construction of a new alfalfa processing plant and inert gas storage unit at Garden City, Kansas. Ground was broken Jan. 11 for the storage, which will have a capacity of 18,000 tons.

The storage will consist of 16 bolted steel tanks with unloading facilities to handle bulk or sacked material arriving in hopper cars or boxcars and trucks. This is the third major gas storage and processing unit for the National company. Other facilities are located at Midland, Kansas, and Omaha.

The processing plant has been designed to handle all types of dehydrated alfalfa and includes high-speed blenders, oiling equipment and machinery to regrind pellets. Contractor for the plant and the excavation work for the storage is the Robert Construction Co., Sabetha, Kansas. Awarded the contract to provide and install the steel tanks was the Butler Manufacturing Co., Kansas City.

According to National officials, construction should be completed in time to handle new crop alfalfa starting in late April or early May. They point out that the Garden City location was chosen in order to store production from National dehydrating units along the Arkansas river in Colorado and Kansas. Garden City is situated so that the outbound material can move through the Kansas City gateway or to the South and Southwest.

The new storage unit will increase National's inert gas capacity to around 68,000 tons. This includes 30,000 tons at Midland and 20,000 at Omaha.

"The new unit adds further to National's position as the operator of the largest inert gas storage capacity for alfalfa in the world," Henry Hofmann, president, said. "When the Garden City plant is completed, we should be in a position to furnish in excess of 150,000 tons annually of guaranteed 100,000 units vitamin A alfalfa on a 12-month basis."

Cake and Meal Output In November Tops October Production

WASHINGTON — Combined U.S. production of soybean, cottonseed and linseed cake and meal in November topped by more than 25,000 tons October production, according to figures released by the U.S. Department of Commerce. Combined stocks of cake and meal at crude oil mills at the end of November were also larger than those a month earlier.

Production of soybean cake and meal totaled 583,622 tons in November compared with 580,039 tons in October. Cottonseed cake and meal production totaled 370,633 tons in November as against 328,503 tons in October. However, linseed oil production went down from 79,384 in October to 59,312 in November.

The government figures on stocks on hand at mills at the end of November are as follows: Soybean cake and meal, 59,761 tons Nov. 30 compared with 48,958 the month before; cottonseed cake and meal, 173,742 tons compared with 170,721 tons on Oct. 31; linseed cake and meal, 16,695 tons as against 23,235 tons a month earlier.

HEADS DELAWARE GROUP

NEWARK, DEL.—Leo Tammi of Newark is the new state president of the Delaware Poultry Improvement Assn., replacing Ed McIlvanie of Georgetown. Mr. Tammi has about 8,000 laying hens producing market eggs on his farm west of Newark.

Soil Bank Proposals Outlined in President's Message to Congress

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—A major part of the President's farm message to Congress this week dealt with the proposed "soil bank" plan for reduction of overwhelming crop surpluses.

The President also made certain recommendations regarding specific crops, including proposals relating to use of wheat for feed. (See story in next column.)

Essentially, the administration has taken to itself the "soil bank" plan, for which it is recommending the authorization of $350 million in new money for the coming fiscal year. This would be used as a cash payment encouragement for farmers to take marginal field crop lands for wheat, cotton and rice out of production. This fund would be in addition to the current annual appropriation of $250 million for agricultural conservation payments (ACP).

In adopting the soil bank plan—an old timer in farm program operations, applied originally in 1938 for cotton—the administration has developed a new twist to its proposal inasmuch as it recommends another feature which would encourage farmers to reduce their production of wheat, cotton, rice and possibly corn below the acreage allotments now set by the U.S. Department of Agriculture or by legislative mandate.

This latter provision would be developed by farmers through payments under what would be known as the "acreage reserve program" of the soil bank. Such payments would be in certificates redeemable in kind or in cash from Commodity Credit Corp.

In his message to Congress, "Doctor" Eisenhower diagnoses the farm problem as one of existing surpluses plus farm production, even under reduced price support levels, which fails to bring supply and demand into balance. As fast as surpluses are liquidated, new crop deliveries under loan programs come in the back door—not only for the basic farm crops but for new non-basic crops which are in themselves coming into surplus condition.

Two Major Parts

The cornerstone of the administration farm program is the soil bank, which the President splits into two major parts. The President treats at this time with specific recommendations the big surplus crops of wheat, cotton and rice. Corn he handles in a separate category but subject to somewhat parallel treatment.

He told Congress: "I submit a soil bank of two parts: The first is designed to meet the immediate need to reduce the crops in greatest oversupply. It may be called the acreage reserve program."

The acreage reserve program is aimed at the nearby problem, to halt further build-ups of surpluses. It is aimed even at the current crop of wheat, part of which is now in the ground. Its first targets are the wheat and cotton crops. It is a voluntary program under which farmers would extend their reduction of acreage for those crops beyond the acreage limitations now imposed.

For such voluntary further reduction, the farmers cooperating would be paid either in kind or in cash by CCC.

Here is what the Chief Executive told Congress on this point: "In the case of wheat and cotton, I look to a voluntary reduction equivalent to possibly one fifth of the acreage otherwise permitted by allotments—perhaps 12 million acres of wheat and 3 million of cotton. It should be practical to include wheat already seeded, if it is incorporated with the soil, as green manure, or by other accepted practices. This should make it possible for more farmers to enter the program immediately and thereby start at once to work down surpluses."

Such land voluntarily taken out of production of wheat and cotton—and such other crops, corn for example, which Congress may designate—would be withheld from all harvest or cash cropping and would be banned even for grazing purposes.

Certificates

To compensate farmers for immediate cooperation in the "acreage reserve program," the government would pay them in certificates redeemable either in kind or in cash, callable on CCC.

Here is how this phase of the program will work according to reliable USDA officials: A farmer who had an acreage allotment of 80 acres for wheat might voluntarily reduce his planted acreage by another 10 acres. For this reduction he would be entitled to a certificate. The certificate would be worth, either in cash or kind, the annual average yield of wheat grown on that land in a base period—say, 20 bu.—times the acres voluntarily taken out of production.

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President Makes Recommendations For Corn, Wheat

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — The President's farm message this week dealt in part with specific suggestions for certain commodities.

Included were proposals regarding use of wheat for feed.

Following is an analysis of the wheat and corn recommendations:

Wheat — The administration farm message noted the critical condition of wheat under the accumulated surplus, citing the soil bank and other programs as well suited to cope with the condition. Other changes, however, are seen necessary to meet the conditions fully.

The President's message said, in part, that Congress should promptly pass the Senate-approved measure which would exempt wheat land from marketing quotas where farmers use on their own farms all the wheat they produce.

Use of wheat for feed came in for emphatic attention by the chief ex-

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Combined AFMA Convention, Show Set for May 1-3, 1957

CHICAGO—The combined American Feed Manufacturers Assn. 49th annual convention and the fifth National Feed Industry Show will be held May 1-3, 1957, at the Conrad Hilton Hotel in Chicago.

The dates for the combined event were announced this week by W. E. Glennon, AFMA president, and Eldon H. Roesler, manager of the National Feed Industry Show.

This will be the first time the two events have been held simultaneously, and plans are under way to handle the largest crowd of feed men ever to meet at one time. AFMA conventions have usually been held in Chicago during the past half century, while National Feed Shows have been staged every two years since 1949 in conjuction with annual meetings of regional feed associations in Milwaukee, Buffalo and Kansas City.

Present plans call for meetings of AFMA in the morning on each of the three days, with the feed show open each afternoon. With show and convention activities concentrated in one building, officials of both events expect excellent delegate participation.

Mr. Roesler noted that the 200-exhibit-booth space on the lower level of the Conrad Hilton is an ideal location. He said that sale of space will not start until some time later this year. Show headquarters will be located at 1712 W. St. Paul Ave., Milwaukee 3, Wis. All exhibit details will be handled from there.

1956 Convention

Although AFMA officials expect the 1957 meeting to be the largest in feed manufacturing history, Mr. Glennon pointed out that the forthcoming AFMA convention will be a very important event. AFMA directors, committees and staff members are concentrating their efforts on the 48th annual convention, which will be held at the Morrison Hotel, Chicago, May 23-25, 1956.

During a recent meeting of the convention program committee, a new feature was planned. The Thursday afternoon program, May 24, will have two concurrent sessions. One will deal with nutrition and the other with expansion of the agricultural market. The remainder of the program outline is unchanging with two morning sessions Thursday and Friday, and the Sunshine Hour Thursday evening. Annual meetings of the AFMA board of directors, Nutrition Council, executive traffic committee, committee of purchasing agents and feed control relations committee will be held Wednesday, May 23.

Although speakers for the 1956 meeting have not been announced, Mr. Glennon noted that advance hotel reservations point to another tremendous crowd. He said that the convention program committee has extended bids to outstanding leaders of industry and agriculture, and that announcement of the official program would be made in the near future.

The program committee is headed by Dr. J. L. Krider, McMillen Feed Mills, Fort Wayne, Ind. Other members of the committee are A. B. Clow, American Cyanamid Co., New York; Guy L. Cooper, Jr., O. A. Cooper Co., Humboldt, Neb.; Donald D. Dilworth, Klau-Van Pietersom-Dunlap, Milwaukee; Frank Heffelfinger II, King Midas Feed Mills, Minneapolis; Chester M. Kessler, Allied Mills, Inc., Chicago, and, Kenneth D. Lozier, St. Regis Paper Co., New York.

Cuban Molasses Sales Reported

WASHINGTON—The U.S. Department of Agriculture reports that the U.S. had received 101.6 million gallons of Cuban high-test molasses as of Nov. 30, 1955. This left a balance of 48.4 million gallons to be shipped.

These figures were released by the Cuban Sugar Stabilization Institute.

Blackstrap exports from the 1955 Cuban crop totaled 91.4 million gallons as of Nov. 30, leaving a balance of only 4.4 million gallons unshipped.

The Cuban government had assigned 130.2 million gallons of 1955 blackstrap for local use or manufacture by Nov. 30, 1955. Of this amount, 94.8 million gallons had been sold.

Total Sheep, Lambs on Feed For Market 8% Below Year Ago

WASHINGTON — The number of sheep and lambs on feed for market in the U.S. on Jan. 1 was 8% smaller than last year, according to the Crop Reporting Board. The number is estimated at 4,100,000 head, 345,000 head less than last year. Most of the decrease occurred in the western Corn Belt and on wheat pastures in the South and central Great Plains States. The majority of the western states also showed decreases.

In the 11 Corn Belt states, the number of sheep and lambs on feed is estimated at 2,145,000 head, 13% below a year ago. Lamb feeding was less than a year ago in all of the Corn Belt states except Indiana and Illinois which showed an increase of 12% each, and Ohio, Missouri and South Dakota which reported the same number on feed as last year. Elsewhere in the Corn Belt, reductions are as follows: Kansas, down 33%; Nebraska, down 26%; Iowa, down 20%; Wisconsin, down 13%; Minnesota, down 3%; and Michigan, down, 2%.

Shipments of sheep and lambs into the Corn Belt states for which state inspection data are available for July through December, 1955, were 7% below the same months for 1954.

The number of lambs on feed in the wheat pasture areas of the Great Plains was down sharply from last year. In Kansas, the number of sheep and lambs on wheat pastures on Jan. 1 is estimated at about 84,000 head, compared with 147,000 head last year. Rains in October in the central plains started wheat, but lack of rain since October has limited growth and only a limited amount of acreage, mostly irrigated, was available for pasture. Total lambs on feed in Kansas were down 33%; in Oklahoma, 10%, and in Texas, 25%.

The number of feeding lambs on feed in Colorado, the leading western feeding state, was 10% below Jan. 1 last year. In northern Colorado, 335,000 head were on feed compared with 397,000 head last year. The Arkansas Valley in Colorado showed an increase of 32%. In California, the second largest feeding state in the West, sheep and lambs on feed are estimated at 320,000 head—3% larger than on Jan. 1, 1955. Lamb feeding in the North Platte Valley of Nebraska and Wyoming was below a year ago. Elsewhere in the West, numbers on feed this year were lower than a year ago in most states. Washington is estimated to have 22% fewer sheep and lambs on feed. Idaho, Utah and Nevada were each down 9%; Arizona, down 8%; Oregon, down 5%; and Wyoming, down 2%. Montana had 22% more sheep and lambs on feed this year than a year ago.

Farmers in Alabama had approximately 42,000 lambs on pastures on Jan. 1 this year. In North Dakota, the number of sheep and lambs on feed at 122,000, is 52% larger than a year ago.

Weather conditions to Jan. 1 have been generally favorable for lamb feeding, except in the Great Plains states where lack of rainfall has restricted development of wheat pastures. Outside of parts of the Great Plains and western Corn Belt, feed supplies are ample. Prices of feeder lambs on the Denver market advanced from the low point of $16.25 reached during mid-August to a high of $19 the last week in November. The average price of good and choice feeder lambs at Denver for the week ending Dec. 31, 1955, was $17.50 per hundred pounds compared with $18 for the same week a year earlier.

Chick Placements Increase; Broiler Prices Move Higher

SALISBURY, MD.—Delmarva broiler prices rose nearly 2¢ lb. last week over the previous week. The average price paid on the farm during the week ending Jan. 7 was 20.7¢, compared to 19¢ the week before.

Broiler chick placements in Delmarva at 3,033,000 for the week ending Jan. 7 were 4% above a week earlier and 27% above the level of a year ago. Increases of 1% in inshipments and 4% in local hatchings account for the change in placements from a week earlier. Settings at 3,288,000 were 1% above the previous week and 5% above the same week of 1955.

Chick placements in Delaware totaled 1,588,000 or just 1% below the previous week; egg settings at 1,487,000 were down slightly. In Maryland chick placements totaled 1,280,000 or 12% above the previous week; egg settings at 1,842,000 were up 3%.

Nationwide, for 22 reporting states, chick placements totaled 21,055,000 for the week. This was 4% more than during the previous week and was 40% more than during the same week a year ago. Of the 22 states, placement decreases from a week earlier occurred in only six states: Connecticut, Indiana, Missouri, Delaware, South Carolina and Arkansas.

Egg settings in 22 states totaled 30,669,000. This was a sharp increase over the previous week of 5% and was 31% more than during the same week a year ago. Increases over the previous week occurred in 17 of the 22 states with largest increases occurring in Indiana, Missouri and Georgia. No states showed sharp decreases.

Delmarva growers marketed 2,364,000 broilers during last week. This was 9% more than the previous week and 8% more than the corresponding week last year.

The price of 20% broiler feed rose slightly during last week, going to $91.20 ton, compared to $89.08 a week earlier. In spite of the higher feed cost, the increase in the price of broiler meat made a more favorable meat-feed ratio. A pound of meat would buy 4.5 lb. of feed, compared to 4.2 the previous week.

Prices paid for eggs, f.o.b. Boston for Jan. 5 were 57@58¢ and for Jan. 10, 53@54¢.

IOWA FIRM EXPANDS

EAGLE GROVE, IOWA — The Farmers Cooperative Co., Eagle Grove, Iowa, has put its new feed mill into operation. The feed mill is part of an expansion program which will represent an investment of more than $200,000. Kenneth Trautman is the manager.

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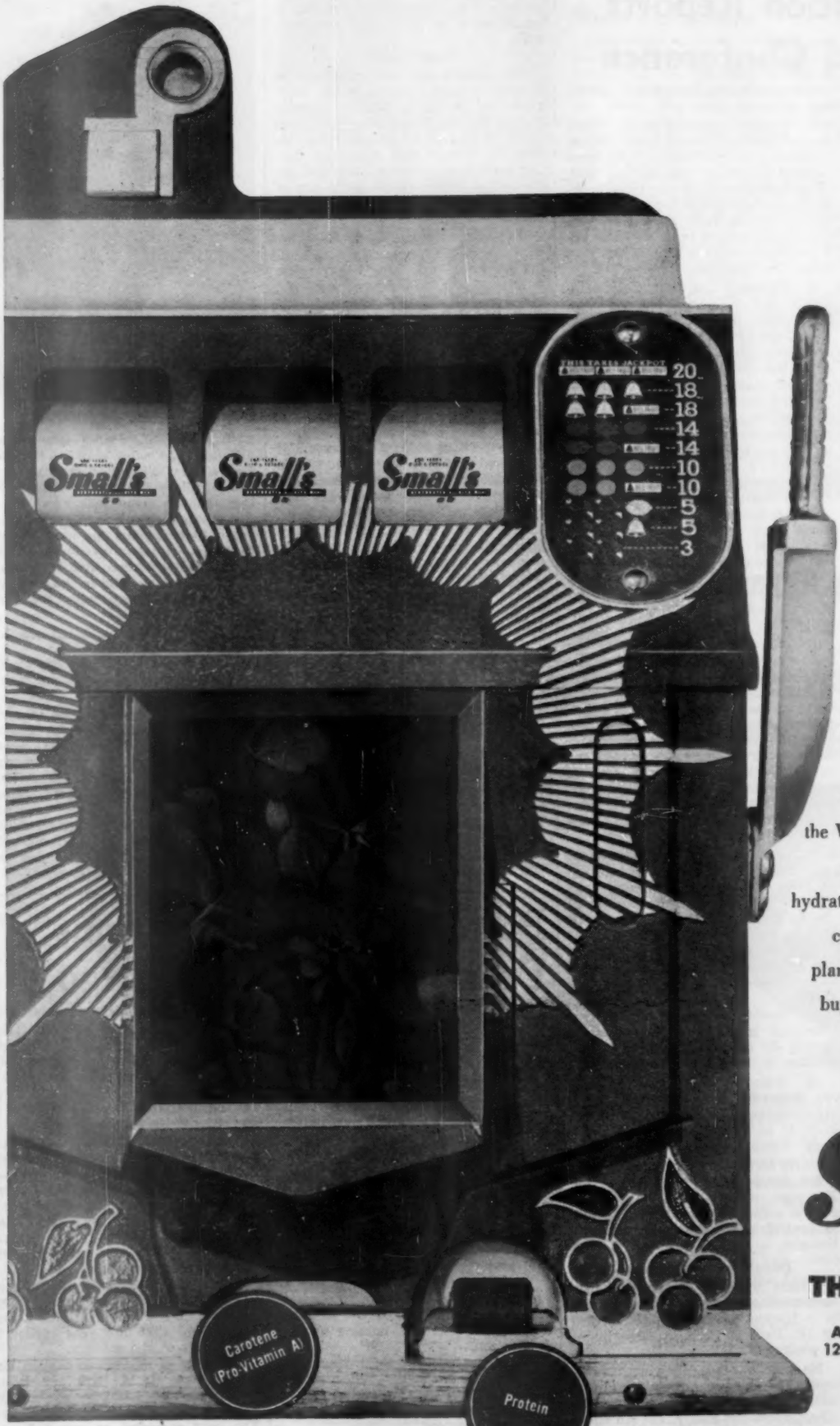

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375 Hear Nutrition Reports At Kansas Feed Conference

By JAMES W. MILLER
Feedstuffs Editorial Staff

MANHATTAN, KANSAS — Tremendous progress in feed management and nutrition was clearly emphasized at the 11th annual Kansas Formula Feed Conference at Kansas State College here Jan. 9-10. The event, which is one of the leading nutrition conferences in the country, attracted 375 persons, including a large number of feed dealers as well as representatives of the sales and research staffs of feed manufacturing companies and allied trades.

(A major portion of the program is reviewed here. The remainder of the program will be summarized in next week's Feedstuffs.)

Broader research in stilbestrol feeding, nutritive requirements of poultry, the protein and amino acid requirements of poultry as influenced by energy level, and the latest information on feeding swine and dairy cattle were among the topics discussed by guest speakers and members of the Kansas State school of agriculture staff.

Augmenting the speaking program was an exhibit set up in the livestock judging pavilion which graphically demonstrated the results or current status of feeding experiments being carried on or just completed at the college.

Stilbestrol Research

Of interest in the field of cattle feeding were the observations on stilbestrol experiments at Kansas State as presented by Dr. Draytford Richardson, department of animal husbandry. Noting that the Kansas results do not always agree with those reported elsewhere, Dr. Richardson summarized as follows:

1. Age as well as weight seems to influence the response to stilbestrol. One finds it more difficult to improve the natural gaining ability of a younger animal that is being fed properly than one that is more mature.

2. Weight, inasmuch as it generally expresses maturity, is an important factor. Older, heavier animals usually give a greater response.

3. Sex—the rate of gain is usually increased with heifers; however, the amount and consistency of gain seem to be greater with steers.

4. Estrogenic content of feed—natural estrogens or hormone-like substances are found in natural feedstuffs. The amount appears not only to vary from one kind of feedstuff to another but also within the same kind of feedstuff. This fact played a very important role in recent developments in this field. This fact, in my opinion, largely explains the differences obtained by workers with stilbestrol.

5. Type, quantity and quality of ration—It seems perfectly obvious that a greater response is obtained with a high-energy, fattening type ration that otherwise meets the nutritive requirements of the animal.

6. On pasture—Although there is some work to indicate a possible response, this certainly appears to be a doubtful practice in a strictly grazing program. It may have possibilities where cattle are being fed a fattening ration on grass.

7. Length of feeding period—there seems to be no benefit from feeding stilbestrol over a longer time than normal fattening periods. In fact, most results indicate that more benefit is obtained in the first part of the feeding period than the latter part. One might reason that the body adjusts itself to the intake of this hormone-like substance.

8. Digestion—available data indicate that stilbestrol has no beneficial effect upon digestion; in fact, there seems to be a lowering of nutrient digestibility. Therefore, it is logical to assume that digestibility is not a factor in the increased rate of gain and that other factor or factors are responsible.

9. Shrink—(a) To market—data on this subject are not in agreement and more information is needed. There seems to be a tendency for greater shrink with stilbestrol-fed animals; however, it should be recognized that differences, if any, are very small. (b) Cooler shrink—here again more data are needed; however, there seems to be a slight tendency for carcasses of animals fed stilbestrol to shrink slightly more in the cooler.

10. Carcass quality—results are not in agreement on this point; however, it is apparent that the feeding of stilbestrol has very little effect upon carcass quality if used in a fattening ration as approved. If it has any effect at all on the carcass, it tends toward lowering its grade. This seems to be brought about by less marbling and more free fluid in the meat. Normally, with increased rates of gain one would expect the carcass to grade higher.

11. Rate of gain and cost—one must receive a 0.1 to 0.15 lb. increase in rate of gain and increased feed efficiency to pay for the additional cost of stilbestrol. Gains in excess of this amount should result in a profit to the feeder. Results indicate that the only economically desirable place to use stilbestrol is in the fattening ration.

12. Residue in meat and gastrointestinal tract—present means of testing do not indicate there is any residue in the meat or G-I tract.

13. Breeding of swine—the breeding, farrowing, etc., of swine following cattle receiving stilbestrol, do not seem to be affected.

14. Effect on breeding animals—animals to be used for breeding purposes should not receive stilbestrol. However, we need not be as concerned about breeding stock getting stilbestrol by error as was originally thought.

Poultry Carcass Quality

Effects of kinds of rations on carcass quality in poultry were studied in a Kansas State project analyzed by Dr. Paul E. Sanford, department of poultry husbandry.

He reached the following conclusions: (1) Corn was found to give a lower per cent shrinkage than the other grains fed singly. (2) An equal combination of milo and barley produced the lowest per cent shrinkage among birds fed various combinations of grains. (3) There appeared to be no definite correlation between the amount of fat deposited on the viscera and abdominal wall and the per cent of shrinkage. (4) Birds fed corn had superior carcass quality for those dressed at eight weeks and four days. (5) An equal combination of corn and wheat was observed to produce superior carcass quality in birds dressed at 10 weeks. (6) Wheat was found to give superior feed efficiency. (7) The lowest feed cost per pound of gain was produced by chicks fed barley, based upon costs at the time of the experiments. (8) Superior growth was obtained by feeding a combination of 10% corn and 90% milo.

Caged Layers

The advantages and management factors in raising caged layers were given by Dr. H. L. Wilcke, Ralston Purina Co., St. Louis. More attention needs to be paid to temperature control, Dr. Wilcke said, especially during periods of extreme high and extreme low temperatures. Efficiency of egg production in relation to the body weight is emphasized by use of cages.

While accurate culling is one of the advantages of the cage system, culling methods that have been in use have not been the most practical, the speaker said. The number of birds that should be culled will depend upon the price of eggs and the price of feed, but it is apparent from data obtained that most flocks have been culled too rigidly. Culling probably ought to be held to around 15% every ten weeks, Dr. Wilcke said.

Data have been obtained on shell quality on over 200,000 eggs produced by caged birds, indicating that good shell quality has been produced. The percentage of soft-shelled eggs was .98; broken .72, and checked 1.2.

One of the problems in cage production is cage fatigue, a condition frequently confused with rickets or fowl leukosis. It usually occurs in birds which are in a high rate of production, but affected birds drop to a low level of production or go out of production. Recovery may be spontaneous in the cage or on the floor, if they are removed. Various nutrients have been studied in connection with this problem, but increased levels of calcium, phosphorus and manganese have not affected the course of this condition.

The cage method of operation is a convenient and practical way of managing layers under conditions where the climate is mild, and it can be successful in any climate when proper housing conditions are maintained, Dr. Wilcke said. The question of the practicability of this system in the colder climates will depend upon economics.

Use of the artificial rumen to study the action of rumen microorganisms was discussed by Dr. Orville G. Bentley, department of animal science, Ohio Agricultural Experiment Station, Wooster. The speaker described several experiments which have utilized the artificial rumen technique including B-vitamin synthesis, the mineral requirements of rumen mi-

(Continued on page 78)

Fred Quattlebaum

RED HAT SALESMAN—Recent addition to the sales staff of the Red Hat Feed Division of the Alabama Flour Mills is Fred Quattlebaum. Mr. Quattlebaum, who will reside in Foley, Ala., will manage a portion of south Alabama and the west Florida territory. He is a graduate of the Alabama Polytechnic Institute in agricultural science and in the past two years he has been with the John Deere Co.

3,233,376 CWT. IN EMERGENCY FEED

WASHINGTON — Under the 1955 U.S. Department of Agriculture emergency feed program, 51,736 farmer purchase orders were issued for 3,233,376 cwt. of approved grains or mixed feeds as of Dec. 29, USDA announced this week. Farmers who received the aid were in need because of drouth, hurricanes or floods.

Potential Layers on Farms Down 3% From Year Ago

WASHINGTON—The U.S. Department of Agriculture's latest crop report shows that the number of potential layers on farms as of Jan. 1 was just about in line with earlier predictions.

Potential layers on farms (hens and pullets of laying age plus pullets not of laying age) totaled 411 million, 3% less than a year earlier. (See accompanying table.)

Holdings were below a year ago in all parts of the country. Decreases ranged from 1% in the west north central region and the West to 5% in the south Atlantic and south central states.

While the number of layers at the start of the year is down somewhat, the rate of lay is expected to show a continued increase, holding up egg production.

Later in the year, the laying flock will increase somewhat, reflecting the expected increase this spring in the purchase and raising of chicks for flock replacement.

The USDA report showed that there were about 27 million pullets not of laying age on farms Jan. 1—7% more than a year earlier. Holdings were above those of a year ago in all parts of the country except the east north central region. Pullets not of laying age represented about 6.5% of the potential layers on Jan. 1, compared with 5.9% a year ago.

The report also noted that the nation's laying flock during December averaged about 387 million layers—down 3% from a year earlier. Layers decreased from a year earlier in all parts of the country. Decreases varied from 1% in the east north central states to 6% in the south Atlantic and south central states.

Farm flocks laid 5,467 million eggs in December—2% less than in December, 1954. Production was somewhat below that of a year earlier in most parts of the country.

The rate of egg production in December was 14.14 eggs per layer, compared with 14.06 a year earlier and the 1945-54 average of 11.13 eggs. The rate exceeded or equalled previous records in most parts of the country.

Hens and Pullets of Laying Age, Pullets Not of Laying Age, Potential Layers on Farms, Jan. 1

Year—	North Atlantic	East North Central	West North Central	South Atlantic	South Central	Western	U.S.
Hens and Pullets of Laying Age on Farms, Jan. 1 (thousands)							
1945-54 (average)	61,133	77,404	100,914	36,914	69,168	37,301	381,833
1955	72,570	79,026	103,163	38,045	63,469	40,731	397,013
1956	70,764	77,136	101,435	35,844	59,552	39,551	384,313
Pullets Not of Laying Age on Farms, Jan. 1 (thousands)							
1945-54 (average)	4,184	5,120	7,876	5,500	9,002	3,124	34,816
1955	4,387	3,988	4,332	4,334	5,811	3,161	24,913
1956	4,617	3,964	4,557	4,476	6,251	3,962	28,736
Potential Layers on Farms, Jan. 1* (thousands)							
1945-54 (average)	65,317	82,524	117,790	42,422	78,170	40,425	426,648
1955	76,957	83,024	107,494	43,379	69,280	43,892	421,926
1956	75,381	80,100	105,992	40,319	65,803	43,513	411,038

*Hens and pullets of laying age plus pullets not of laying age.

Respiratory Disease Problem In N.J. Reported

VINELAND, N.J.—The respiratory disease situation in New Jersey poultry flocks is the worst Dr. F. R. Beaudette, head of the animal pathology department at Rutgers University, can recall.

Speaking at the Vineland Egg Auction recently, Dr. Beaudette said that trouble is being experienced not only with Newcastle disease, but also laryngotracheitis, pox, bronchitis, chronic respiratory disease and coryza.

Dr. Beaudette advanced a number of explanations for the situation, most of which revolved around faulty vaccination methods, poor timing and inadequate vaccine. These add up to a situation so confused that it is difficult for a pathologist to put his finger on the exact cause of any individual disease outbreak, he said.

Among the causes for Newcastle outbreaks, Dr. Beaudette listed (1) too early vaccination, before the chicks have lost any parental immunity they might possess, (2) vaccinating too often, (3) using strains of vaccine so mild that they only produce a short immunity, and (4) using vaccine which has deteriorated.

The Rutgers pathologist also said that he suspects many poultrymen who are putting Newcastle vaccine in the drinking water are using too small a dose. "We have demonstrated that water vaccination is really intranasal," he said. "Therefore, the only vaccine that does any good is that which gets into the nostrils of the birds when they are taking a drink."

A fundamental fact to remember, he said, is that it is useless to vaccinate any bird that possesses immunity to Newcastle disease. If a chick has inherited parental immunity through the egg, any vaccine used on him before this immunity has worn off will do no good.

The length of time parental immunity lasts in the chick varies with different individuals. With some birds, it may last two or three weeks, but it is practically all sure to be gone at four weeks of age. If a poultryman has his flock in an area where the danger of exposure to Newcastle is small, so that he can delay vaccination until the chicks are four weeks of age, he should get maximum results and the protection should last for close to 90 days, Dr. Beaudette said.

If the danger of exposure is great, he may find it necessary to vaccinate at 10 days to two weeks, in which case some of the chicks may still possess parental immunity. In a few days this immunity will wear off and those chicks will be wide open to Newcastle infection. However, most of the flock will be protected.

In any case poultry farmers should make sure they know what vaccine was used on their birds. Many of those who bring sick or dead birds to the laboratory to be "posted," he said, don't have this information. This makes diagnosis of the cause of the outbreak more difficult.

If a poultryman vaccinates at two weeks of age and again at six weeks, the second vaccination will be largely wasted because most of the birds will still carry some immunity from the first vaccination. The second vaccination should be delayed until the majority of the birds is no longer immune.

Discussing the increase in the incidence of pox, Dr. Beaudette said his men are finding it in flocks vaccinated by the wing-stick pigeon-pox method. The lesion produced by this method is so small that no appreciable immunity is conferred on the birds. The larger the lesion, the greater the immunity resulting from the vaccination.

Carl F. Rosvally

VICE PRESIDENT — Carl F. Rosvally has been elected vice president in charge of sales for the D. H. Grandin Milling Co., Jamestown, N.Y. Mr. Rosvally has held the position of general sales manager since joining the company in 1951.

Protein Meal Futures Show Fair Gains

MEMPHIS — Fair advances were posted last week by protein oil meal futures at the Memphis Board of Trade. Volume was improved during the week. The price advance was based in part on higher soybean prices and some cash demand.

Some selling in deferred positions was thought to be a result of strength in soybean oil, which some say has improved the conversion ratio. There was a fair amount of spreading both within the soybean oil meal market and against cottonseed oil meal. The liquidation of January was said to be progressing in an orderly fashion.

Final unrestricted soybean oil meal prices for the week were unchanged to $1.50 ton higher. There were 30,000 tons sold as against 22,400 tons a week earlier. Open interest declined 77 contracts.

Eastern trunk line soybean oil meal prices were unchanged to $1.10 higher. Sales of 4,900 tons compared with sales of 2,600 tons the previous week. There was a gain of nine contracts in the ETL open interest.

Cottonseed oil meal showed good strength in January, with a tight situation existing in cash oil meal that month. There was a good demand for cottonseed oil meal during the week, but sales of 6,200 tons showed a decline from the 7,800 tons traded the week before.

RECORD RATE OF LAY

WASHINGTON — The annual rate of egg production per layer on hand during 1955 was at a record high of 188 eggs, according to the U.S. Department of Agriculture. The 1955 rate compares with 184 eggs in 1954 and the 1945-54 average of 166 eggs. The rate has continued to increase with improved breeding and feeding. Total egg production by farm flocks in 1955 was a record high of 67,355 million eggs—3% more than in 1954. Most of the increase was due to the higher rate of lay.

A. E. Staley Reduces January Processing

DECATUR, ILL.—The A. E. Staley Manufacturing Co. reported recently that it was reducing its soybean processing operations at Decatur by 15% in January.

A. E. Staley, Jr., president, said the reduction reflects over-production of soybean products. He said demand for products was higher in the last quarter of 1955 than in the same period of 1954, but demand has fallen behind the record processing rate, with no improvement expected for several weeks.

Mr. Staley cited figures showing how soybean crushings have been running ahead of corresponding levels a year earlier.

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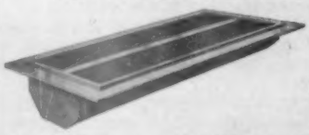

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Jan. 1 Stocks of Feed Grains On Farms Are Second Largest

WASHINGTON — Stocks of feed grains on farms Jan. 1, 1956, totaled 83.5 million tons, second largest of record, the U.S. Department of Agriculture reported this week. The total was 6% below the record of Jan. 1, 1949.

Compared with other January holdings, corn stocks ranked fourth of record, oats highest in 30 years of record, barley highest in 13 years and sorghum grain largest in five years.

Near record hay stocks of 73.9 million tons were also on hand Jan. 1, after heavy feeding in many sections during November and much of December.

Flaxseed stocks of 16.5 million bushels were the second largest in 13 years, USDA reported, and soybean stocks of 116 million bushels were second only to the record holdings of a year ago.

Stocks of corn on farms Jan. 1, 1956, totaled 2,191 million bushels compared with 2,093 million bushels a year ago and 2,058 million the average. Stocks were 10% above Jan. 1 a year ago in the eastern part of the Corn Belt, with largest increases in Illinois, Indiana and Missouri where 1955 production was up from the preceding year. But stocks were 12% lower in the western Corn Belt where 1955 production was under 1954. Changes in the two areas of the Corn Belt largely offset, resulting in a small decline of 2% for the entire belt, USDA said.

The greatest increase in Jan. 1 stocks was in the area from Oklahoma and Texas eastward to the Atlantic where many states experienced bumper crops.

Disappearance of corn from farms during the October-December quarter was 976 million bushels compared with 947 million bushels in the same quarter a year earlier and 1,031 million the average. Disappearance from farms was above the corresponding quarter a year ago in all areas except the western Corn Belt where a considerable volume of old and new corn is under CCC loan on farms, USDA said.

Record Oats Stocks

Stocks of oats on farms Jan. 1 totaled 981 million bushels, an all-time high. This represents an increase of 7% over the quantity on hand a year earlier and 18% more than the 1945-54 average. These large stocks are mostly from the record large 1955 crop, and consist of all farm-stored oats.

Compared with a year ago, farm stocks on Jan. 1, 1956, are larger in all northern regions of the country with Iowa, Minnesota, Illinois and Wisconsin the leading states. As usual, more than four fifths of the oats on farms are in the 12 North Central states where about the same portion of the total oats was produced.

Disappearance of oats from farms during the October-December period of 1955 is indicated by USDA at 263 million bushels—the second largest of record, exceeded only by the 299 million in 1946. Movement from farms was the largest in four years and the sixth largest of record in the North Central states.

Barley Stocks High

USDA estimates that barley stocks on farms Jan. 1, 1956, totaled 190 million bushels compared with 165 million a year ago and 122 million the January average. These are the largest January farm stocks since 1943 and follow the largest production since 1942. Farm stocks were greater than a year ago in all important barley producing states—North Dakota, Montana, Minnesota and California.

Barley disappearance from farms during the October-December quarter of 1955 was 67 million bushels compared with 61 million the same quarter a year earlier.

Sorghum grain stocks on farms Jan. 1 at 68 million bushels were 24% greater than the holdings of 54.7 million bushels a year earlier and 31% more than the 10-year average. Farm stocks were sharply below last year in Kansas and Nebraska, but in Texas and Oklahoma stocks were much above last year.

Disappearance of sorghum grain during the October-December quarter was 170.3 million bushels, USDA reported, the largest of record and compares with 164.5 million bushels for the same period a year earlier. The current disappearance accounts for approximately 71% of the available supply on Oct. 1, 1955. This indicates, USDA said, that sorghum grain has moved rapidly from farms and was utilized more in the grain feed rations for livestock, particularly in areas where corn production was curtailed in 1955.

Large Hay Stocks

Farm stocks of hay on Jan. 1 were estimated at 73.9 million tons. These holdings were 1.3 million tons larger than last year, and the second largest of record, having been exceeded only by the 75 million tons on farms Jan. 1, 1943. In relation to the number of roughage consuming animal units on farms, the current stocks are 2% larger than either last year or the 10-year average, according to the USDA report.

Stocks are fairly well distributed over the country. They are above average in all regions except the North Atlantic group of states.

At the beginning of the current feeding season, supplies of hay were at an all-time high of 124.6 million tons. Because of a late summer and fall drouth, feeding of hay began somewhat earlier than usual and at an accelerated rate in about one half the states in the North Central region, and in the North Atlantic states. Cold weather during November in the Western Mountain states and adjacent areas also contributed to the high rate of feeding.

Open weather so far this winter throughout most of the country permitted full use of available pasturage, partially offsetting and temporarily reducing the demand for hay, USDA said. Despite this, the disappearance of hay since harvest was at a higher rate than a year earlier and the fourth fastest of record.

Stocks of soybeans on farms Jan. 1 totaled 116 million bushels, the second highest of record, being exceeded only by the 149 million bushels on farms a year ago. Current farm stocks are 69% above the 10-year average.

From a total supply of 375 million bushels on Oct. 1, 1955, the movement of soybeans from farms for the October-December quarter amounted to 260 million bushels, the highest of record for the period. This compares with 193 million bushels for the same quarter a year ago. The previous record for the quarter was 216 million in 1952.

As usual, USDA said, the farm stocks of soybeans are concentrated in the North Central area. However, each of the major producing states has less farm stocks than a year ago. Illinois, Minnesota, Iowa and Indiana, in that order, have the largest stocks.

Farm stocks of flaxseed on Jan. 1 were estimated at 16.5 million bushels, the largest holdings on this date since 1948, the first year of record. Nearly 71% of the U.S. total is in North Dakota. Disappearance of flaxseed from farms during the October-December quarter totaled 3.8 million bushels, the smallest since 1953.

GRAIN AND HAY STOCKS ON FARMS—JAN. 1

The Crop Reporting Board of the Agricultural Marketing Service makes the following report for the U.S. from data furnished by crop correspondents, field statisticians and cooperating state agencies:

Crop—	Jan. 1 ave., 1945-54		Jan. 1, 1955		Jan. 1, 1956	
	%*	1,000 bu.	%*	1,000 bu.	%*	1,000 bu.
Corn for grain	72.6	2,057,555	78.1	2,093,235	76.7	2,191,409
Wheat	32.5	373,894	32.6	321,321	34.2	320,800
Oats	62.7	828,703	61.5	930,789	62.3	981,305
Soybeans	28.0	68,377	43.7	149,178	31.1	115,600
Barley	45.6	121,992	44.6	165,195	48.5	189,510
Rye	29.7	6,338	39.4	9,583	48.1	14,048
Flaxseed	†29.5	†11,388	38.2	15,608	40.7	16,530
Sorghum grain	37.7	53,076	25.3	54,733	29.3	68,058
Hay	67.8	†69,259	69.2	272,667	67.4	273,940

*Per cent of preceding crop. †Short-time average. ‡1,000 tons.

Emergency Feed Program Expanded

WASHINGTON—The U.S. Department of Agriculture has announced the designation of six California counties as disaster areas where eligible farmers and stockmen can participate in the emergency feed program.

The counties are: Butte, Del Norte, Tulare, Humboldt, Sutter and Yuba.

Previously, the USDA designated Harney County, Oregon; all eight counties in Connecticut, and Churchill, Douglas, Lyon, Mineral, Ormsby, Storey and Washoe counties, Nevada, as disaster areas. The Oregon county was designated because of the drouth damage over the past two years. The Nevada counties suffered major losses in recent floods.

These designations bring to 130 the number of counties in 10 states to be listed, either as a result of drouth, hurricanes or floods. All the California designations are the result of floods.

States and counties designated in the program include: California 6, Colorado 4, Connecticut 8, Kansas 42, Nevada 13, North Carolina 10, Oregon 2, Texas 34, Utah 4, and Wyoming 7.

Under provisions of the emergency feed program, eligible farmers and stockmen in designated areas may obtain certain feed grains at a reduction in price of $1 cwt.

National Alfalfa Storage Unit Burns

OMAHA—A fire which broke out late Jan. 6 caused a total loss of a warehouse and contents operated by the National Alfalfa Dehydrating & Milling Co. here. The National firm indicated that 3,265 tons of sacked dehydrated alfalfa meal were stored in the unit at the time of the fire and due to the difficulty of fighting the smouldering blaze little salvage could be expected. The warehouse is located near the alfalfa processing and inert gas storage facilities owned by National here, but the more important units were not endangered by the fire.

MIDWEST CONVENTION TO HAVE EXHIBITS

KANSAS CITY—For the first time in the convention's history, an allied trades exhibit will be sponsored by the Midwest Feed Manufacturers Assn. at the annual meeting here Feb. 26-28. The association announced that the exhibit would open Sunday afternoon, Feb. 26, in the Colonial Ballroom of the Hotel Muehlebach. The exhibit was instituted at the request of several firms, and at a recent meeting the directors of the association approved the idea. Lloyd S. Larson, executive vice president of the association, indicated that information concerning the exhibit is going out to associate members of the MFMA this week.

James E. Baker

J. E. Baker Forms New Firm; Rodney Anspach Fills Wilbur-Ellis Post

LOS ANGELES—James E. Baker, who has been associated with Wilbur-Ellis Co. for the past 23 years, has resigned his position with the firm to establish a feed distribution firm of his own, James E. Baker & Co.

Wilbur-Ellis has announced the appointment of Rodney Anspach to succeed Mr. Baker. Mr. Anspach has been with the company for nine years, in charge of fish meal and meat scrap sales. He now will be in charge of all feedstuffs marketing in southern California and Arizona.

Mr. Baker is a past president of the Los Angeles Grain Exchange and past president of the California Hay, Grain & Feed Dealers Assn. His new firm is located at 245½ S. Western Ave., Los Angeles 4.

N. W. Manufacturers To Meet Jan. 23

MINNEAPOLIS—Byron G. Allen, Minnesota commissioner of agriculture, will speak at a dinner meeting of the Northwest Feed Manufacturers Assn. Jan. 23 at the Calhoun Beach Hotel in Minneapolis.

Mr. Allen will discuss the relationship of farm production costs to prices farmers receive for their products.

At this meeting, the association also will present its annual contribution to research at the University of Minnesota, and a staff member will respond with a report on what is being accomplished with the help of the fund.

Hearing on Indiana Feed Rule Planned

LAFAYETTE, IND. — Dr. F. W. Quackenbush, Indiana state chemist, has announced a hearing to be held on a proposed new rule on procedure for payment of inspection fees under the Indiana commercial feed law of 1953.

The public hearing will be held at 10 a.m. Jan. 30 in Room 105 of the Biochemistry Building, Purdue University, Lafayette.

All interested persons are invited to attend. Copies of the proposed rule may be obtained from the state chemist on request.

Under the law whereby distributors are permitted to use a reporting system in lieu of attaching state chemist labels, the control officials have experienced some problems in ascertaining that the inspection fee is paid on shipments coming into the state. As a result, Dr. Quackenbush said, the new rule under the law is being proposed and the hearing on it will be held.

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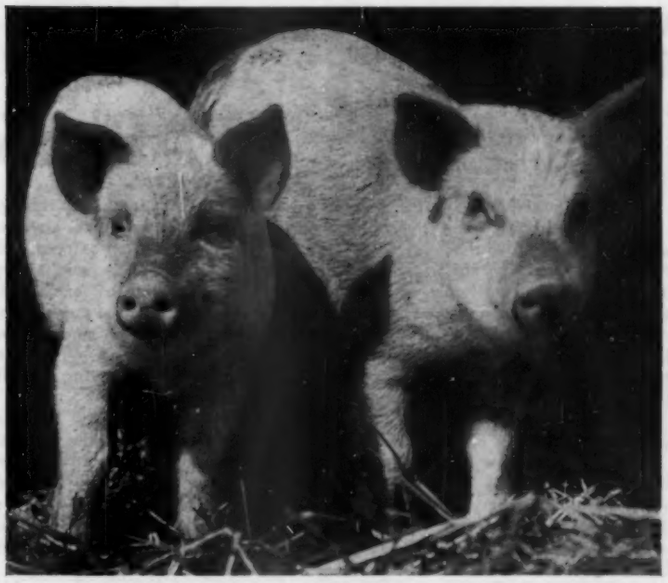

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Survey Provides New Information on Cattlemen's Problems and Practices

NEW ORLEANS — Many answers to questions regarding the problems and practices of U.S. cattlemen were provided this week in a report on the results of a survey covering a wide area of the country.

The report was made at the annual convention of the American National Cattlemens Assn. by Alan Rogers, Ellensburg, Wash., chairman of the association's research committee.

Feed men will be interested in many of the findings, which deal with feeding, disease, management, breeding and other aspects of beef cattle operations.

The questionnaire was designed to cover major problems and practices of American cattlemen. The staff of the State College of Washington scientifically sampled the more than 60,000 members of the 24 state associations affiliated with the American National Cattlemens Assn. As a result, a total of 2,692 names was selected. Some states received few questionnaires, some received many; in all cases the number of questionnaires going into any state was determined by the membership of the state association.

In this connection, it should be noted, in studying results of the survey, that the American National Cattlemens Assn. has few members in the Corn Belt and the Northeast. Thus cattle feeding operations in the Corn Belt area were not covered to much extent in the survey.

It was suggested that, when an effort is made to obtain further data, a survey should probably be nationwide in scope, including the Corn Belt and Northeast as well as other areas. The main areas covered in the study were the South, Great Plains, West and Pacific Northwest.

First Study of Its Kind

Reporting on the survey at the cattlemen's convention, Mr. Rogers said:

"As a result of this grass-roots survey—the first major scientific one of its kind conducted by a livestock industry in the U.S.—we are now in a position of saying 'we know' rather than 'we think' when discussing our problems and needs. We can tell scientists what our problems are and ask that more emphasis be placed on needed beef cattle research and we can more intelligently request needed legislative appropriations—on both state and national levels.

"Other industries have long been cognizant of the new frontiers possible through research, but, unfortunately animal agriculture has lagged behind. It is high time, therefore, that cattlemen realize that they cannot survive in a changing world by using old methods while other industries forge ahead through applying new and scientific findings to their production problems."

But Mr. Rogers warned the cattlemen: "When we ask for more research, however, we must remember (1) that most beef cattle research work is costly, (2) that we must help secure larger appropriations and see that they are made available for beef cattle research, and (3) that other industries have long liberally supported research costs with little assistance from the taxpayer, simply by including it as a normal part of their operating costs. Finally, it should be emphasized that research can make the information available, but it is still up to each individual—each cattleman—to secure and apply the results."

Source of Data

The research committee report, according to its chairman, summarizes and interprets the information obtained from 1,588 questionnaires, in which an estimated 502,616 head of cattle were reported upon, with an average of 316 head per herd.

Of the cattlemen reporting, 95% were active managers, 5% were not; and, of the owners, either they or their family had possessed ownership of the ranch for an average of 39.4 years.

Eight and nine tenths per cent were purebred breeders, while 91.1% were commercial operators, all or in part. Of the cows and heifers bred: 13.9% were purebreds, while the other 86.1% were commercial or of unreported breeding; and, by breeds, 58.5% were Herefords, 4.1% were Aberdeen-Angus, 2.6% were Polled Herefords, and 34.8% consisted of other breeds (including purebreds, grades and crossbreds).

The Findings

Mr. Rogers listed the following among the more pertinent findings of the study:

Diseases and parasites

1. During the course of a year, 8% of all cattle were afflicted by one or more non-nutritional diseases, and 0.6% of all cattle died from such diseases; and 1.3% of all cattle were afflicted by nutritional deficiency diseases and ailments, of which 0.3% died therefrom.

2. The five most common non-nutritional beef cattle diseases, by rank, were: pink eye, calf scours, shipping fever, foot rot, and pneumonia; they accounted for 77.2% of all sick cattle (non-nutritional). Pink eye was reported in nearly half of the herds and afflicted 3% of all cattle.

3. By rank, four diseases—pneumonia, calf scours, shipping fever, and black leg—accounted for 60% of all death losses from non-nutri-

UNCLE TOM'S

FEED FABLES

Funny the things people will do when they get scared or panicky.

Never forget when the Billings Hotel burned down. Like always, everybody turned out to carry water or lug stuff out into the street and it was goin' pretty good when Jim Austin got there. He was a big husky and wasn't afraid of nothin', but Jim was kind of excitable. Other fellas were haulin' stuff out of the lobby, but Jim went rushin' right upstairs like he was rescuin' a lady or a baby, maybe, and everybody yelled at him that there wasn't anybody in the rooms. We were really scared cause the whole back end and roof were blazing and it looked like it would cave in most any minute.

It was real exciting when Jim busted out the front window and the smoke came rollin' out. You could see him real plain against the flames.

Remember how back before the days of plumbing every hotel room had a big porcelain bowl, a water pitcher and a slop jar? Well, sir, Jim went rushin' from one room to another throwin' them things out the windows and, of course, they busted the minute they hit the sidewalk, and then he came strugglin' down the stairs carryin' a mattress on his back.

It was just like Jim said, he got panicky and lost his head. He wanted to do something but he was all mixed up.

Not a whole lot different from the farmer who says, "I won't feed nothin' to these hogs on this market as long as my corn lasts" when he knows darn well that the only reason he feeds supplements is to save corn.

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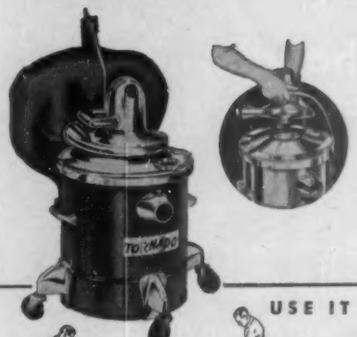

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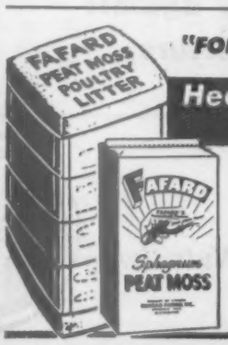

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tional diseases; with pneumonia alone accounting for one-fifth of all non-nutritional mortality.

4. Bloat accounted for 40.5% of all nutritional deficiency diseases and ailments; vitamin A deficiency ranked second.

5. The incidence of vitamin A deficiency and poisonous plant losses was relatively higher in the West than in the other areas; bloat was higher in the South; urinary calculi was higher in the Great Plains; and white muscle disease was higher in the Pacific Northwest.

6. Of the losses due to nutritional deficiency diseases and ailments, 36% were attributed to bloat, 22% to poisonous plants, and 13% to urinary calculi.

7. By rank, the most damaging parasites were: lice, grubs, screwworms and hornfly; with the screwworm by far the most damaging of all in the South.

Feeding

1. The majority of cattlemen used non-legume dry roughages, with grass hay and dried grass cured on the stalk ranking first and second, respectively. Relatively more grass hay was fed in the Great Plains than in other areas, more dry grass cured on the stalk was fed in the Great Plains and in the West, and more cereal hay in the Pacific Northwest.

2. Except in the South, where a long grazing season exists, the cattlemen reported feeding mature cows a daily hay allowance of 18 to 22 lb., which is within the recommended range.

3. Twenty-one per cent of the cattlemen, or one in five, reported that they fed some silage. Corn silage was the most popular. The average daily silage allowance was 25 lb. per mature cow.

4. Twenty-one per cent of the cattlemen reported that they did not feed any protein supplement. Cottonseed oil meal was used by more cattlemen than any other protein supplement; commercial feed supplements ranked second. Also, relatively more cottonseed meal was used in the South than elsewhere.

5. Those cattlemen feeding a protein supplement fed an average of 2.0 lb. daily per head to a mature cow which, generally speaking, appears to be within the recommended range.

6. The following feeding practices prevailed:

(1) 41% of the cattlemen fed cake or cubes on the pasture or range.

(2) 30% of the cattlemen self-fed a salt-protein mix.

(3) 25% creep-fed calves.

(4) 42% of the cattlemen fattened cattle out on pasture alone, 18% grain-fattened cattle, and 24% combined pasture and grain fattening.

(5) 39% fed out their own cattle, 2.3% had them custom fed, and 0.7% custom fed for others.

7. Most cattle—76% of the heifers and 60.2% of the steers—were fattened out as calves and yearlings. The younger cattle required slightly longer feeding periods than older cattle, and the steers required a slightly longer feeding period than the heifers to reach market finish. The cattlemen in the South reported that they fed out relatively older steers than cattlemen in the other areas; whereas, in the Pacific Northwest there was a tendency to feed out older heifers.

8. More cattlemen fed block salt than any other kind, with ground salt ranking second. An average of 25.3 lb. salt was fed to a mature cow per year, or 2.1 lb. per month.

9. Twenty-nine percent of the cattlemen did not feed a mineral other than salt. Seventy-eight percent of those using a mineral other than salt fed a commercial mineral mix.

Breeding

1. Of the cattlemen sampled, 8.9% were purebred breeders, and the other 91.1% were commercial producers, all or in part. Of the cows and heifers bred, 13.9% were purebreds, and the other 86.1% were of commercial or unknown breeding.

2. Of the cows and heifers bred, 58.5% were Herefords, 4.1% were Aberdeen-Angus, 2.6% were Polled Herefords, and 34.8% represented all other breeds—purebreds, grades and crossbreds.

3. There was a 79.5% calf crop, and 62.6% of the cows weaned off calves; which means that there was an appalling calf loss of 21% between birth and weaning.

4. Only 0.15% of the cows bred dropped dwarf calves, and of the

(Continued on page 71)

Millfeed Production Improves Further

Production of millfeed in tons for week ending Jan. 6, and prior two weeks, together with season total of (1) principal mills in Nebraska, Kansas and Oklahoma and the cities of Kansas City and St. Joseph; (2) principal mills of Minnesota, Iowa, North and South Dakota and Montana, including Minneapolis, St. Paul and Duluth-Superior; (3) mills of Buffalo, N.Y. Production computed on the basis of 72% flour extraction.

	Southwest*		Northwest*		Buffalo†		Combined**	
	Weekly production	Crop year to date	Weekly production	Crop year to date	Weekly production	Crop year to date	Weekly production	Crop yr. to date
Jan. 2-6	22,910	690,808	12,373	271,635	10,249	239,702	45,532	1,302,145
Prev. week	‡21,062		‡12,063		10,224		‡43,349	
Two wks. ago	26,081		13,346		11,731		50,158	
1955	34,447	679,408	13,683	365,664	11,386	291,838	49,516	1,336,930
1954	21,248	649,434	15,125	391,169	8,834	274,879	45,207	1,315,482
1953	22,782	684,021	16,580	417,274	8,581	379,624	47,943	1,480,919
1952	26,176	701,222	16,060	298,435	9,683	276,342	51,920	1,274,899

*Principal mills. **74% of total capacity. †All mills. ‡Revised.

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Complete Revised List of Premises Under Khapra Beetle Quarantine

WASHINGTON—Several revisions have been made in the list of premises designated as khapra beetle regulated areas by the U.S. Department of Agriculture.

Seven establishments in Arizona, 15 in California and three in New Mexico have been deleted from the quarantine list in the latest revision, which became effective Dec. 23. The revision also adds to the quarantine list two establishments in Arizona and six in California.

Here is the complete revised list of premises ruled by the Plant Pest Control Branch of USDA to be infested with the khapra beetle and therefore under quarantine:

Arizona

Acme Bag & Burlap Co., Phoenix.
Allied Grain Co., Phoenix.
Arizona Flour Mills, Casa Grande.
Arizona Flour Mills, Tempe.
Arizona Flour Mills, Tucson.
Arizona Grain Storage Co., Chandler.
Arizona Stock Farms, Inc., Arlington.
Arizona Wholesale Supply Co., Tucson.
Arlington Cattle Co. warehouse and mill, Arlington.
C. A. Batty farm, Glenbar.
Box O Ranch, Coolidge.
Brown's Farm Store, Phoenix.
Capitol Feed & Seed, Coolidge.
Capitol Feed & Seed Co., Phoenix.
Chandler Feed & Seed Store, Chandler.
Delinting & Seed Treating Co., Phoenix.
Eilloc farm, Phoenix.
Erly-Fat Livestock Feed Co., Casa Grande.
Erly-Fat Livestock Feed Co., Tucson.
C. H. Espy town property, Yuma.
John H. Evans farm storage, Phoenix.
Farm Equipment & Supply, Parker.
Farmers' Co-op Marketing Assn., Yuma.
Feeders Supply Co., Mesa.
G & H Feed Store, Safford.
Grubbe Hatchery, Yuma.
International Market, Somerton.
Frank Kornegay farm, Yuma.
Henry Leivas farm, Parker.
Long's Dairy, Buckeye.
Mrs. Pearl McCreary ranch, Gilbert.
McElhaney Cattle Co., cattle feed lot, Phoenix.
Millett feed barn and Millett feed and storage warehouse, Mesa.
Northrup-King Seed Co., Yuma.
Pablo Franco ranch, Yuma.
Peterson's Feed & Supply Co., Tucson.
Phoenix Hay & Feed Co., Phoenix.
Quick Seed & Feed, Phoenix.
Ranchers Feed & Supply, Scottsdale.
Red Star Feed & Seed Store, Tempe.
R. F. Richter Feed Store, Parker.
South Central Feed & Supply warehouse, Phoenix.
Southern Feed & Hardware, Phoenix.
Southwest Flour & Feed, Glendale.
Tiemann Feed & Supply Co., Tucson.
Tovrea Land & Cattle Co., Phoenix.
Tucson Hay and Grain Co., Tucson.
Valley Feed & Seed, Phoenix.
Valley Hay Market, Tucson.
Vita-Gro Feed Store, Mesa.
Norman Welker farm, Safford.
Whitman Grain Co., Yuma.
Whitman Seed Co., Yuma.
Yuma County Feed & Seed warehouse and store, Yuma.

California

Paul H. Aspey farm, El Centro.
Janice Axtell farm, Oroville.
I. V. Bag Co., Brawley.
Bakersfield Cattle Feeding Co. ranch, Greenfield.
B. S. Baldwin & Son ranch, Bakersfield.
Beckwith & Co., Delano.
E. M. Bevins ranch, El Centro.
John Binnell chicken ranch, Ontario.
Thomas Blackman property, Calexico.
L. R. Bonesteel ranch, Holtville.
Joe Bowers ranch, Calipatria.
Hershel Brady ranch, Brawley.
Madeline Britton property, Calexico.
C. H. Burns ranch, Shafter.
Camp & Mebane Cattle Co. feed yard, Cawelo.
Louis Carano ranch, Heber.
Charles C. Causey, small farm used for storage and farm feeding, Brawley.
Central Valley Feed Yard, Inc., Imperial.
Louis J. Charlebois, Jr., ranch, Blythe.
Fred Ciendonen ranch, Bakersfield.
Coachella Valley feed yard, Thermal.
J. E. Conrad ranch, Reedley.
C. E. Cook ranch, Imperial.
Olaf Dahlquist ranch, Imperial.
W. Denewiler ranch, Blythe.
Rosie Diffenboeker ranch, Calipatria.
C. R. Dow ranch, Long Valley.
El Centro High School, barn on county farm, El Centro.
The Farmers Cattle Feeding Yard, Brawley.
Harry Finney ranch, Hinkley.
Archie Frick ranch, Arvin.
Forrest Frick ranch, Bakersfield.
Fred Frick ranch, Arvin.
Bud Frye ranch, Reedley.
Ernest Furrer ranch, El Centro.
Pete Gardner ranch, El Centro.
Joe Grassotti ranch, Bakersfield.
Bud Gunterman ranches, Calexico.
L. R. Hamilton ranch, Visalia.
Hangover Farms, El Centro.
F. J. Hauseur & Sons feed lot, Brawley.
Gilbert Hayden ranch, Imperial.
Hiett Dairy, Delano.
C. P. Hiles ranch, Oroville.
Oscar Holdenried farm storage bins, Lakeport.
Holly Sugar Co. feed lot, Brawley.
Holtville Milk Co-op, Holtville.
Ray J. Hovely ranch, Brawley.
Harold Hunt ranch, El Centro.
Alvin Immel ranch, Holtville.
J. A. Ivey ranch, Blythe.
Burt & Clinton James store, Kernville.
Carl Johns & Son ranch, Bakersfield.
D. H. Johnson ranch, Imperial.
Johnson & Drysdale Cattle Co., Calexico.
H. Johnson ranch, Terra Bella.
Everet Jones ranch, Brawley.
A. H. Karpe Greenfield ranch, Greenfield.
Clarence Keel ranch, Calipatria.
J. R. Kennedy ranch, Clearlake Oaks.
Kern County Land Co., Gosford Feed Yard, Bakersfield.
Kern Valley Farms, Arvin.
Henry Kirchener Dairy, El Centro.
C. E. Kline ranch, El Centro.
Estle Lain ranch, El Centro.
R. Langley ranch, Holtville.
N. K. Larsen ranch, Imperial.
Frits Lehman ranch, El Centro.
Miss Mattie Lund and Irene Lund Parker ranch, Oroville.
Gene Malone ranch, Indio.
Tom Manning feed barns, Lakeport.
F. B. Marlow ranch, Westmoreland.
Marshall Seed & Feed Co., El Centro.
Peter L. Marston ranch, El Cajon.
John T. Martin ranch, Earlimart.
Kelly McCollum ranch, Imperial.
M. L. McFarland, small farm, Imperial.
S. C. McGonagale ranch, El Centro.
Mee Ranches (lessee), Bakersfield.
Milham farms, Buttonwillow.
Henry Munger feed lot, El Centro.
L. C. Myers ranch, Brawley.
Newhall Land & Farming Co., Saugus.
Niland Food Market, Niland.
Onyx store property, Onyx.
Oro Farm & Cattle Co., Buttonwillow.
Outsen Milling Co., San Francisco.
Palo Verde school district farm, Blythe.
Pauba Ranch Mill & Feed Yard, Temecula.
I. F. Porter farm, Brawley.
Raymond A. Powell and Mike Deniz ranch, Glenn.
Paul Pryor Dairy, Bakersfield.
C. B. Ralph's ranch, Imperial.
Emil Rebik ranch, Brawley.
Clare Rexroth ranch, McFarland.
J. W. Roberts ranch, Holtville.
F. O. Rosenbaum ranch, Imperial.
Harold B. Ross ranch, Holtville.
Oscar Rudnick ranch, Onyx.
Rudinick Trust feed lot, Bakersfield.
Leroy Schaad ranch, Williams.
F. W. Schoneman ranch, Brawley.
Walter E. Scott ranch, Blythe.
Roy C. Shank ranch, Brawley.
K. K. Sharp farm and storage, Holtville.
Shaw & Dower, feed lot and bulk storage at residence, Holtville.
Frank Sherwood ranch, Hayward.
Alice Sinclair ranch, Calipatria.
Mrs. L. E. Sinclair, Calipatria.
Snyder's Termite Control, Riverside.
Starkey Bros. Dairy, Imperial.
Studer Bros. ranch, Calexico.
K. W. Taylor feed lot, El Centro.
E. W. Thornton ranch, Imperial.
Union Development Co. warehouse, Niland.
John Waterman ranches, El Centro.
Albert Whitlock ranch, Calipatria.
Wildlife Refuge Unit No. 1, Brawley.
Wildlife Refuge Unit No. 2, Brawley.
Wilkerson Bros. ranch, Calipatria.
Ray Willis ranch, Brawley.
R. B. Wilson Co. feed yard, Brawley.
T. O. Witt ranch, Onyx.
D & A Wittenberg ranch, Shafter.
Wright Feed Yards, Seeley.
W. E. Young ranch, Calipatria.
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What's New in Feeding

Putting Feed Research to Work

A recent issue of the Journal of Animal Science (Vol. 14, No. 4, Nov. 1955) included a number of papers on diethylstilbestrol. Reviewed here are papers from the Iowa and Minnesota Experiment Stations on stilbestrol for lambs. (Other reports on stilbestrol will be reviewed in this department in the Jan. 21 issue.)

Iowa Research—A study by Hale and associates at the Iowa Agricultural Experiment Station comprising four individual and two group feeding experiments was conducted to determine the response of lambs fed varied levels of stilbestrol. The stilbestrol addition to the rations ranged from 6.5 mg. to 4.7 mg. per lamb per day.

The individually fed lambs were weighed at 14-day intervals, and the length of the feeding periods was from 56 to 84 days. Two pens of 20 wether lambs each were used in both of the group fed experiments. These lambs were weighed at 21-day intervals and were on feed for 62 days. The levels of stilbestrol fed were 1.8 mg. and 3.6 mg. per lamb per day. Two rations were used for the group fed lambs. The first was a conventional ration consisting of shelled corn, soybean oil meal and alfalfa hay. The second was a mixed ration consisting of ground corn cobs, 27%; cane molasses, 17%; cracked corn, 42.1%; soybean oil meal, 6.4%; urea, 1.4%; bone meal with cobalt, 1%; animal fat, 5%, and a vitamin A concentrate, 0.1%.

The feeding of approximately 2 mg. of stilbestrol per wether lamb per day carefully incorporated in a fattening ration increased rate of gain approximately 22% over the controls. Feed consumption was not consistently increased by the addition of stilbestrol. At the 2 mg. level, stilbestrol had little or no effect upon dressing per cent or carcass grades; however, at higher levels there was an apparent decrease in carcass quality. The 3.6 mg. level of stilbestrol in the group feeding trials did not promote as satisfactory rates of gain as did the lower level (1.8 mg. per lamb per day).

Experimental studies with stilbestrol implants in lambs have generally resulted in substantially increased gain but with a subsequent lowering of carcass quality. There has also been some possible toxic effects on lambs from the implants. At least two investigators have reported for ewe lambs that stilbestrol implantation may cause prolapse of the uteri and rectal prolapse with wether lambs. In these Iowa experiments where the stilbestrol was fed, certain changes in external appearance were observed which were similar to those noted with stilbestrol implanted lambs. The degree of these conditions appeared to be associated with the level of stilbestrol fed. The severe toxicity symptoms observed with stilbestrol implanted lambs were not observed in these Iowa lambs receiving stilbestrol orally.

Minnesota Experiments—P. S. Jordan and associates of the Minnesota Agricultural Experiment Station reported on their experiments having the following objectives: (1) To determine the relative effect of oral administration of stilbestrol on fattening lambs when fed at levels of 0.1 mg., 0.5 mg. or 1.5 mg. per lamb daily. (2) To determine the relative effectiveness of subcutaneous implants of either 12 mg. of stilbestrol or a product called Synovex consisting of a combination of 10 mg. estradiol and 250 mg. progesterone. (3) To compare implants with oral administration of stilbestrol.

High quality western feeder lambs, averaging about 70 lb., were vaccinated for over-eating disease and sheared before being allotted at random to nine lots. Lot 1 consisted of 30 lambs which were fed in one group with three treatments imposed on three sets of 10 lambs each. The lambs in all lots received a standard ration consisting of approximately equal parts of shelled corn and alfalfa hay and 0.1 lb. of soybean oil meal. The lambs were full fed and no attempt was made to limit the amount of grain or hay in any of the lots. Fresh water, salt and a trace mineral salt-bone meal mixture were available to the lambs at all times. Individual weights were taken of the lambs at the beginning and at the end of the experiment. Group weights were taken at 14-day intervals during the experiment. Carcass grades and average carcass yields were obtained at the time of slaughter for the lambs in each lot.

The lambs receiving implants of either stilbestrol or the mixture of estradiol and progesterone (Synovex) gained 0.13 lb. and 0.09 lb., respectively, faster than the control lambs. Feeding stilbestrol at either of the three levels (0.1 mg., 0.5 mg. or 1.5 mg. per lamb daily) did not significantly increase rate of gain. It was observed also that feeding either of the three levels of stilbestrol had no effect on feed consumption or feed efficiency.

The lambs implanted with Synovex produced carcasses of similar dressing per cents and grade as the control lambs. However, the stilbestrol implant lowered both carcass grade and yield. The lambs that were fed 0.1 mg. and 0.5 mg. of stilbestrol had higher grading carcasses than the controls. The carcasses of the lambs fed 1.5 mg. of stilbestrol were comparable in quality to the controls. The dressing per cent or yield based on selling weight of the lamb and warm carcass weights was lower in all lots fed stilbestrol.

Robert T. Whelan

PROMOTED—Robert T. Whelan has been named eastern sales manager of the agricultural department of Nopco Chemical Co., Harrison, N.J., it has been announced by Harold A. Swanson, vice president. In his new position, Mr. Whelan will be responsible for the sale of the complete line of Nopco nutritional feed supplements. He will have direct supervision over all agricultural department sales representatives east of the Rocky Mountains. Before taking over his present assignment, Mr. Whelan served as field sales manager of the agricultural department. He has been connected with Nopco's vitamin operations since 1936, and has been associated with the agricultural department for the past nine years.

Specifide, Inc., Moves Into New Offices

INDIANAPOLIS — Specifide, Inc., staged an open house recently in observance of the opening of new offices in its building adjoining previous headquarters at 3555 Sutherland, Indianapolis.

Expanded manufacturing and processing operations as well as additional personnel made necessary the expansion. The building at 3555 Sutherland is now devoted entirely to plant facilities.

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Furazolidone at Low Levels Improves Chick Growth in Michigan Experiments

EAST LANSING, MICH.—Michigan State University researchers reported recently on experiments showing that furazolidone at low levels in feeds improves the early growth rate of chickens and the feed efficiency of starting and broiler mashes.

Conducting the research were Dr. Philip J. Schaible and David A. Libby of the Michigan State poultry department. A series of six experiments was conducted.

In reporting on the research, the scientists made these conclusions: "Growth rate and feed efficiency were slightly improved by addition of approximately 7.5 grams of furazolidone per ton of feed with no adverse effect on livability. Growth responses were obtained in most instances in the presence of penicillin and arsanilic acid.

"The influence of different supplemental sources of carbohydrates as well as milk products upon the value of furazolidone was investigated. In general, whey products enhanced the value of the substance.

Contaminated Environment

"Furazolidone was more effective under heavily contaminated than cleaner environments. This is of great importance because chickens ordinarily are exposed to great degrees of stress under practical farm conditions."

(Furazolidone is a synthetic organic chemical. Chemically it is N - (5 - nitro - 2 - furfurylidene) - 3 - amino - 2 - oxazolidone. Under the name nf-180, Dr. Hess & Clark, Inc., markets a product containing 11% furazolidone.)

In introducing their report on the experiments, the authors noted that continuous low-level use of antibiotics and arsonic acids is believed to suppress, modify or eliminate certain unrecognized species of undesirable micro-organisms, endemic in "old" quarters, which get established in the digestive tract of apparently healthy chicks and slow down their rate of growth.

"Since the value of these diverse chemicals appears to be related to their action upon intestinal flora, other substances having an antimicrobial effect may be found to have some influence on the early growth rate of poultry," the Michigan report said. "One likely substance is furazolidone, a new member of the nitrofuran series of antibacterial compounds which is useful for the control of bacteria of the genus Salmonella encountered in the intestinal tract of birds.

Low Levels

"Inasmuch as this compound seemed promising, efforts were made to evaluate it for possible growth-promoting value and effect on feed efficiency when used at substantially lower levels in the feed than for the prevention or treatment of diseases. These low-level effects are quite independent of its higher-level action against the Salmonellas."

Substances that suppress organisms which compete with the host or which produce substances toxic to the host should improve the rate of early growth of chickens, the researchers said. To be effective, the substances should have solubility characteristics that permit it to be useful under conditions as they exist throughout the alimentary tract.

"Furazolidone is known to inhibit the growth of organisms which cause many diseases in poultry in addition to Salmonella infections," the report said. "Its bacterio-spectrum is considered rather wide in relation to the species of organisms endemic in heavily infected poultry environments. Furazolidone is stable under ordinary conditions and soluble to the extent of only 37 mg. per liter of water or 10 mg. per liter of oil. This relative insolubility of furazolidone is of advantage because: (1) it reduces absorption by the chicken and, in effect, diminishes toxicity of the drug; (2) the insoluble phase acts as a reserve supply to become available continuously throughout the intestinal tract to replenish the effective concentration in the soluble phase.

Consistently Improved Growth

"As evidence of these attributes, the experiments show that furazolidone at low levels in feeds consistently improves the early growth rate of chickens and the feed efficiency of starting and broiler mashes. It appears to be compatible with antibiotics as well as arsanilic acid and gives about the same response quantitatively as these substances.

"Being an inhibitor of bacterial contamination, the effectiveness of this substance under conditions of variable degrees of contamination was compared. The results of these experiments show that nf-180 was more beneficial under the greater stress conditions of contamination.

"Commercial broiler production usually is carried out under conditions closer to the contaminated conditions artificially created in the study reported. Consequently, it is interesting to note that where a substantial challenge was provided, the growth response was greater with nf-180 than under clean battery conditions.

"The broiler trial in one of the experiments confirmed the shorter term battery tests and showed that a response from nf-180 may be expected under conditions surrounding commercial broiler production. Further comparison of weights at 4 and 10 weeks of age indicates that nf-180 was effective throughout this entire period.

"Throughout this series of experiments, mortality was decidedly low and in no one experiment could the mortality rate be directly correlated with the experimental rations. However, if the entire series of experiments were to be considered as a whole, a marked protective effect can be demonstrated for furazolidone. Of 552 chicks started on basal feeds, 1.6% died; of 1,132 started on varying levels of furazolidone, only .3% died."

DAIRY SPECIALIST

NEW BRUNSWICK, N.J. — Edward T. Oleskie has been promoted to associate extension dairy specialist at the Rutgers University College of Agriculture. He succeeds Enos J. Perry, who has retired to accept a similar position in Egypt. Mr. Oleskie joined the extension staff in 1953 with the rank of assistant specialist. Frank A. Wright, who also joined the Rutgers faculty in 1953, has been named assistant extension dairy specialist and will take over many of the duties formerly performed by Mr. Oleskie.

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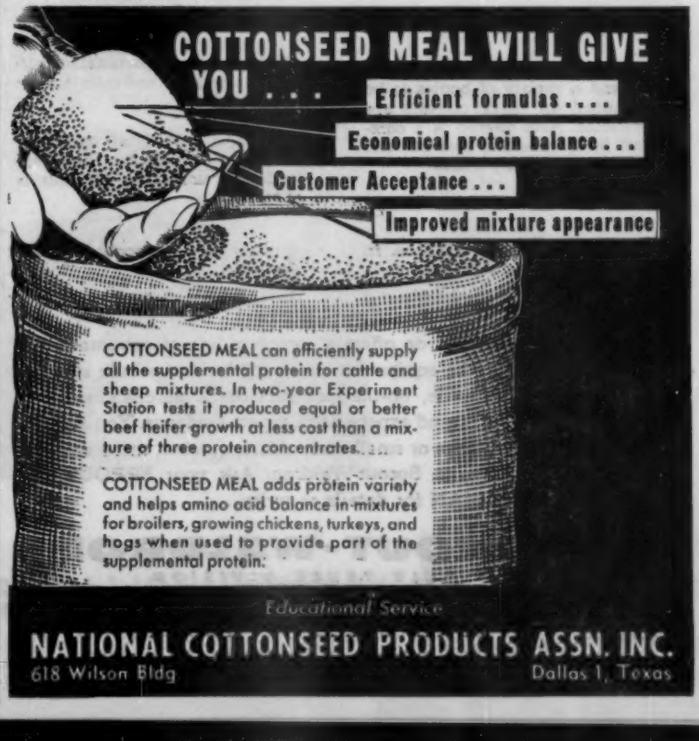
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Drugs in Formula Feeds

Some General Considerations and Quality Control Procedures

By Maxwell L. Cooley

During the past five or six years, problems involving the use of drugs in formula feeds have been numerous. Although worming feeds using such additives as nicotine sulfate and nicotine alkaloid have been in use for a number of years, medicated feeds, probably were not produced on a large scale until satisfactory coccidiostats were developed.

Unthrifty birds, suffering from coccidiosis, and frequent deaths of broilers and chicks caused by it, were a serious detriment to profitable operations. Naturally, as the number of birds raised in a given area is increased and crowded housing facilities are reused, disease conditions such as those of coccidiosis become rampant.

The parasitic disease coccidiosis is caused by oöcysts from fecal matter of infected birds, picked up and ingested by young birds from litter on the ground. The disease causes bloody droppings, reduced consumption of feed, retarded growth, and increased mortality, largely in young birds; older ones, such as laying hens, usually by earlier contact with coccidia have developed an immunity, although they are still carriers.

Sulfa drugs—sulfaquanidine, sulfamethazine, and others—were investigated as therapeutic agents in the treatment of poultry diseases. Compounds such as Sulfaquinoxaline and Megasul (nitrophenide) were found effective as coccidiostats and now are widely used in formula feeds for broilers and chicks. Other drugs useful for this purpose include Nitrofurazone, Nicarbazin, and Nitrosal.

With the addition of these coccidiostats to feeds, more and more medicaments have come into use for various specific purposes. For growth stimulation, better appearance, and feathering of broilers, manufacturers now frequently incorporate in formula feeds additives such as the organic arsenicals, 3-nitro-4-hydroxyphenylarsonic acid, arsanilic acid, and sodium arsanilate. Drugs like enheptin (acetylamino nitrothiazole) and histostat (4-nitrophenylarsonic acid) are used against histomonisasis (blackhead) in turkeys. Furazolidone (N-(5-nitro-2-furfurylidene) - 3 - amino - 2 - oxazolidone), also a blackhead preventive, prevents diseases in poultry caused by Salmonella organisms (pullorum, the paratyphoids, and fowl typhoid). Cadmium compounds (the oxide and the anthranilate) are important hog wormers.

Rather recent research developments have led to use in feeds of synthetic female hormones or estrogens such as diethylstilbestrol, for fattening beef cattle, and dienestrol diacetate for better distribution and deposition of fat in the flesh and tissues of broilers, which results in a desirable finish to the birds. DPPD (diphenyl - para - phenylene diamine), an antioxidant, aids in preventing encephalomalacia (crazy chick disease). Antibiotics such as Aureomycin, Terramycin, procaine penicillin, and bacitracin are added to feeds for various purposes.

Procaine penicillin is used largely at subtherapeutic levels for growth stimulation of chickens and turkeys. Although the broader spectrum antibiotics, Aureomycin and Terramycin, may be used at low levels for growth stimulation, they are also extremely valuable therapeutically at relatively high levels (50-200 g. per ton or more) for the prevention and treatment of various diseases of livestock and poultry. Examples of disease against which these antibiotics are effective are: in poultry, chronic respiratory disease or air-sac infection, sinusitis, nonspecific infectious enteritis, blue comb, mud fever, hexamatiasis; in livestock, swine enteritis and calf scours.

Things to Consider

Before using these various drugs, antibiotics and hormone additives in their formula feeds, manufacturers should inquire into the following considerations:

1. Approval of the use of the drug by Food and Drug Administration, Washington, D.C., is required, especially where interstate commerce is concerned. Incidentally, FDA approval merely indicates that the drug

EDITOR'S NOTE: Medicated feeds, which continue to increase in use, are receiving more attention these days. And on Jan. 23-24 a public symposium on medicated feeds is being held in Washington, D.C. In view of this attention, the accompanying article will be of special interest at this time. The article deals with general considerations involved in the use of drugs in feeds, and it goes into detail on the quality control aspects relating to some of the newer drugs. The information is designed primarily for persons in technical positions in the feed industry who are responsible for laboratory assay procedures. The author, Maxwell Cooley, formerly was with General Mills, Inc., and now is technical director of the animal nutrition division of Hoffman-Taff, Inc., Springfield, Mo. The article is reprinted from an American Association of Cereal Chemists publication, AACC Transactions.

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is safe for use under specific conditions.

2. Is the drug in question efficacious, as well as economical, so that livestock and poultry raisers will obtain greater profits over feed costs by using the medicated feed?

3. Labeling and analysis tags must meet requirements of the Food and Drug Administration, as well as those of the feed control officials. Proper directions for use, as well as any necessary cautions or warnings, must be clearly placed on the labeling.

4. The feed manufacturer should be aware of any hazards in handling the drug in his manufacturing processes.

5. Toxicity levels in feeds are important information to the feed manufacturer so that he is able to emphasize to his operators the undesirable effects feeders will have if excessive amounts of the drugs are added to the feeds.

6. A quality control program should be enforced, to make sure that the medicated feeds being produced are meeting specifications and standards.

Quality Control

Of the above six considerations, we will elaborate only on quality control aspects. As with any ingredient used in formula feeds, the manufacturer must have a program of inventory control and checks on weighing equipment, coupled with laboratory assays to make sure that the resulting feeds containing drugs are uniformly meeting quality requirements. The FDA demands that for each new drug there must be available a satisfactory laboratory assay procedure for its determination in the final feeds. The general aspects and brief descriptions of procedures for determining certain of the common medicants are presented in an article on Progress in Feed Quality Control (Feedstuffs, Dec. 11, 1954). As to details, each drug supplier can furnish the feed manufacturer upon request the latest developments in laboratory procedures for his specific drugs.

Because the assay of many of the drugs which have been used for a considerable time is more or less common knowledge, I will discuss only procedures which apply to some of the newer drugs, as well as later developments and modifications of older procedures.

As has been pointed out a number of times previously, the determination of 3-nitro-4-hydroxyphenylarsonic acid in feeds ordinarily entails analyzing the feed for its arsenic content. The arsenic content of the organic arsenicals is constant. Separation of the arsenic by distillation is necessary, and by determining the percentage of this element in the feed, the chemist can calculate the amount of arsenical present. The arsenic procedure is somewhat difficult and is not as readily adapted to routine control work as ordinary colorimetric methods for drugs. For this reason, a simple colorimetric method for 3-nitro-4-hydroxyphenylarsonic acid has been developed. The procedure involves extraction of the drug with a potassium bicarbonate solution, decolorizing with carbon black, and measuring the residual color of the drug in solution. This method is not extremely precise, but for rapid checks on the drug content of feeds containing this organic arsenical, the results obtained thus far are quite promising.

DPPD (diphenyl - p - phenylenediamine) is commonly used in broiler feeds at a level of 0.0125%. This antioxidant is determined by extracting 10 g. of feed with 75 ml. of acetone. An aliquot of the extract is saponified with alcoholic potassium hydroxide. The DPPD is then extracted with benzene. The benzene is evaporated from a suitable aliquot and a colored solution is developed by addition of 10 ml. concentrated nitric acid. The color is measured in a colorimeter at 490 mμ.

Nicarbazin is a relatively new coccidiostat. The active drug is the complex 4,4' - dinitrocarbanilide • 2 - hydroxy - 4,6 - dimethylpyrimidine. It is used in feeds at a level for prevention of coccidiosis in chickens. The determination of Nicarbazin in feeds may be made either analyzing for the pyrimidine part of the complex or for the dinitrocarbanilide. The 2-hydroxy - 4,6 - dimethylpyrimidine reacts with sulfanilic acid and sodium nitrite in diluted sulfuric acid solution to give a colored solution having absorption maxima at 450 and 540 mμ.

The 4,4'-dinitrocarbanilide is de-

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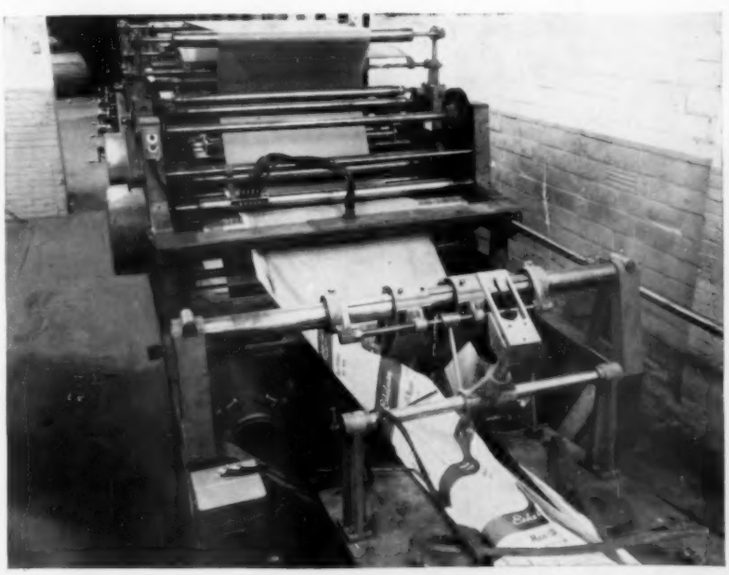

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BACIFERM effectively stops secondary invaders in poultry—fights black scours in swine, because it exhibits a high degree of *selectivity* in controlling harmful organisms such as streptococcus, micrococcus, and vibrio.

Selectivity Helps Vitamin-Producing Bacteria

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BACIFERM has proved effective in controlling secondary infections and conditions associated with blue comb, non-specific enteritis, infectious enteritis, air-sac disease and infectious swine enteritis. BACIFERM stimulates appetites, keeps animals on feed. During disease or other stress periods, results show that BACIFERM reduces mortality, hastens recovery . . . gets more poultry and swine to market *faster*.

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Sneezing, sniffling, and a dry rattle, symptoms of CRD, were observed in 8500 six-week-old broilers in Mississippi. BACIFERM was added to the feed at a level of 185 grams of bacitracin per ton. In three days, the symptoms subsided . . . and the birds never went off their feed.

Improvement in 18 hours . . .

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An Indiana farmer bought 40 runts averaging 20 pounds per pig and scouring badly. At the same time, he purchased 227 normal pigs. The first night, three runt pigs died. The remaining runts were fed a standard ration fortified with CSC's high-level PENBAC®. In less than five months after purchase, these "runts" were marketed at an average weight of 222 pounds, grading better than #1 Choice. The normal pigs on the regular ration did not reach market until much later.

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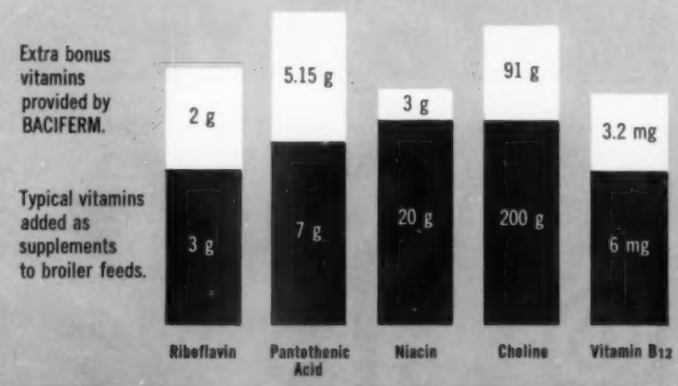

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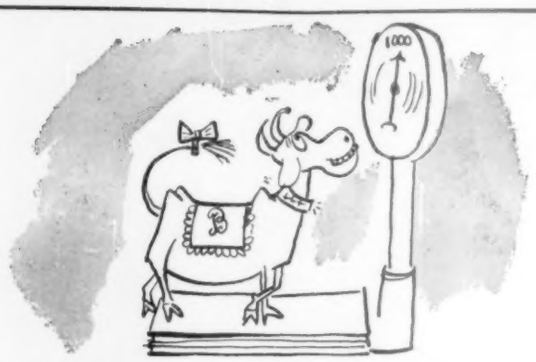

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termined by a well-known method for analyzing dinitrocarbanilide. This is a colorimetric procedure wherein alcoholic sodium hydroxide is used to color a solution of the drug. We feel that the latter determination is simple and satisfactory. Briefly, the Nicarbazin in a 10-g. sample of feed is extracted with dimethylformamide with heating and stirring. After extraction, the solution is made up to 100-ml. volume and allowed to settle. A 15-ml. aliquot of the supernatant liquid is pipetted onto an aluminum oxide chromatographic column. Nicarbazin is eluted with 95% ethanol and made up to 50 ml. in a volumetric flask. A 10-ml. aliquot is placed in a colorimetric tube and 3 ml. of alcoholic sodium hydroxide are added with mixing. The resulting yellow solution is read at 430 mμ.

Stilbestrol

Diethylstilbestrol is being used more and more extensively in cattle-fattening feeds. There are two methods for determining this estrogen in feeds. One assay method requires the diethylstilbestrol to be extracted with chloroform. The extract is then filtered and extracted with lime water. This second extract is clarified, acidified, and then finally extracted again with chloroform. The chloroform is carefully evaporated from the solution and the residue is taken up in glacial acetic acid. The solution of the estrogen is transferred to a quartz tube and the tubes are subjected to irradiation with a Hanovia Examalite for 6 minutes. A standard solution of diethylstilbestrol in glacial acetic acid is irradiated under the same conditions. The absorbances of the solutions are measured in a suitable spectrophotometer at 410-420mμ and from the absorbance readings the percentage of the diethylstilbestrol is calculated.

The method that we have found satisfactory and relatively simple does not require the use of a quartz spectrophotometer such as the Beckman DU, but merely a photoelectric colorimeter. This method is as follows:

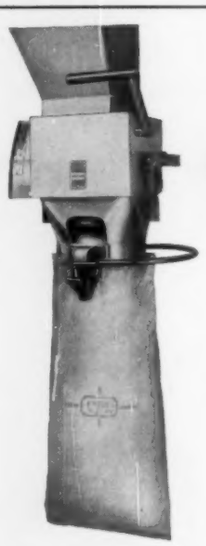
A 10-g. sample of feed containing diethylstilbestrol is extracted in a 125-ml. Erlenmeyer flask with 30 ml. of ethyl ether. The solution is allowed to stand for at least 20 minutes with agitation every 2 or 3 minutes. It is then filtered and the residue washed with ether. The ether extracts are then collected in an Erlenmeyer flask. The ether is evaporated with heat and reduced pressure to approximately 5 ml. The solution is transferred to a 125-ml. separatory funnel which contains 40 ml. of petroleum ether. The flask is rinsed with additional portions of ethyl ether. Twenty milliliters of freshly filtered lime water are added to the separatory funnel and the contents thoroughly mixed. The lower lime-water layer separates and is collected in a 125-ml. Erlenmeyer flask. Two more extracts with lime water are made. The combined lime-water extract is acidified with 1 ml. of glacial acetic acid. The acidified solution is then extracted with three 15-ml. portions of ethylene chloride. These extracts are then collected in a 50-ml. volumetric flask and diluted to the mark with ethylene chloride. A 5-ml. aliquot is transferred to a colorimetric tube and 5 ml. of antimony pentachloride solution are added. The red color which develops is measured in the colorimeter at 525 mμ.

Dienestrol diacetate, as has been pointed out earlier, is used in feeds for broilers and turkey fryers at 0.007% to promote better finish of the birds. This is used in the feed only during the last three weeks before slaughter and seems to uniformly distribute and deposit the fat in the tissue of the bird—similar to the conditon which is observed with caponettes. The method of determining dienestrol diacetate in feeds depends on extracting the estrogen with petroleum ether, filtering the extracts, and evaporating the petroleum ether from the filtrate. The residue is then dissolved in glacial acetic acid. To an aliquot of the glacial acetic acid solution, a few milliliters of a 4% solution of vanillin in glacial acetic acid are added. This solution is mixed thoroughly and to it are added 20 ml. of concentrated hydrochloric acid. The solution is cooled, placed in a separatory funnel, and shaken with 20 ml. of chloroform. The absorbance of the acid layer is measured in a colorimeter at 630 mμ.

Antibiotics

Even with the advent of newer drugs, the use of antibiotics in feeds continues to be of major importance in disease control and in feed efficiency. The pad plate microbiological method is satisfactory. By use of this pad plate method, assay of feeds, containing two kinds of antibiotics is possible. It is desirable, however, that the assayist know which types of antibiotics are present in the feed sample. Assay for the individual antibiotics requires either destruction of one or the other or separation by differential solubilities.

We are well aware that drug and pharmaceutical manufacturers are continuing to work very extensively in investigation and development of new drugs. In many cases these pharmaceuticals are primarily for human use, but very frequently are just as valuable and possibly more desirable for use as feed additives. No one drug or antibiotic developed thus far is a panacea for every disease found in livestock and poultry. Even drugs for specific therapeutic purposes in formula feeds have at times been found to be lacking in efficacy and palatability, and at other than extremely low levels are dangerously toxic to the animal. Many developments along these lines have been made and we in the feed manufacturing industry may expect even greater ones to provide us with better and more satisfactory drug additives for incorporation in our formula feeds.



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Broilers Should Be Sold at 10-11 Weeks, Economists Report

COLLEGE PARK, MD.—Broilers should be sold at 10 to 11 weeks of age, according to Dr. Harold D. Smith and James Horne, agricultural economists, at the University of Maryland.

This is the most profitable age, the economists say, because records show that the dollar return, above out-of-pocket costs, reaches its maximum at this time. Out-of-pocket costs include the chicks, feed, medicine, fuel and litter.

The producer who sells his chicks at 10 weeks realizes this higher dollar return more than the producer who holds his chicks for longer or even shorter periods, Dr. Smith said. Average broiler weights at 10 weeks were 3.25 lb.

Dr. Smith and Mr. Horne said they found these results in a study of broiler production efficiency and methods of financing production. They used actual flock records of poultrymen on the Eastern Shore for the study.

Poultrymen selling their broilers after 10 weeks, experience a higher cost for each pound of meat produced, according to their study. Returns, above out-of-pocket costs, averaged $67 per 1,000 chicks started and sold at 10 weeks, while nine-week birds, averaging slightly less than 3 lb. brought returns of $64 per 1,000. Dr. Smith reported that flocks selling past 12 weeks did not pay for their out-of-pocket costs, resulting in a net loss to the average producer.

This and other information will be related to the cost of financing broilers under different profit sharing agreements used on the Eastern Shore of Maryland. Preliminary results show that the dollar returns to the grower are also affected by the financing methods and certain management practices used in broiler production.

Many producers tend to sell their broilers at lighter weights when prices are high, while others tend to hold their birds for longer periods in hopes that the market will rise. "In view of this," Dr. Smith said, "our study bears out the fact that broilers should be sold at 10-11 weeks."

New Mill, Elevator Building Announced

MINNEAPOLIS — The new mill and elevator building trend is continuing, and recent announcements tell of some new construction in Iowa.

A new feed mixing and bulk feed handling plant will be built for the Farmers Co-op. Co. at Pocahontas, Iowa, by the T. E. Ibberson Co., Minneapolis. And at Randall, Iowa, Ibberson is constructing a feed mixing and bulk handling plant which will also contain high molasses mixing equipment.

At Wesley, Iowa, the Farmers Co-op Elevator Co. has awarded a contract for construction of a 260,000-bu. concrete elevator which will contain 26 bins, including a drier bin. The elevator will be 161½ ft. high and will contain a 6,000-bu. leg, with provision for future installation of a similar leg. An aeration system and a grain temperature indicating system will be provided.

Other modernization work and additions are being made by Ibberson for the McCabe Co. at Battle Lake and Stephen, Minn., and several North Dakota points; Farmers Co-op Assn. at Hull, Iowa; Quaker Oats Co. at Radcliffe, Iowa; Farmers Elevator Co. at Elmore, Minn.; E. J. Houle Co. at Forest Lake, Minn.; Garvin (Minn.) Co-op Elevator Co., and Valley Grain Co. at Sanborn, N.D.

FEED STORE EXPANDS

ST. JOSEPH, MO.—An addition to the Benton Feed Store of St. Joseph, Mo., is under construction. Richard Benton is owner of the firm.

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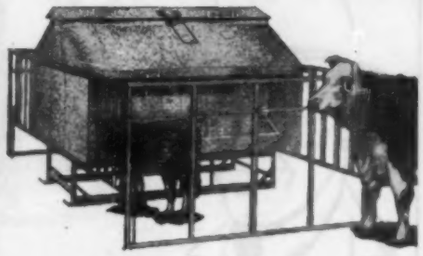

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"And I like being a MURPHY dealer. MURPHY'S CONCENTRATES let me custom mix good fresh feeds, using my customers' own grains, which lets me maintain a lower inventory on my floor and turn it over faster. The good results my MURPHY customers are getting really keep them coming back and this means a good, steady repeat business for me.

"MURPHY'S policy of not selling direct but always through a dealer has also meant a great deal to me. All this plus MURPHY advertising help in radio, television, farm papers, and a really effective low-cost direct mail program gives our sales a real boost. There's no summer or seasonal slump-off in my MURPHY business and a good, steady, year-round feed business is what every dealer wants."

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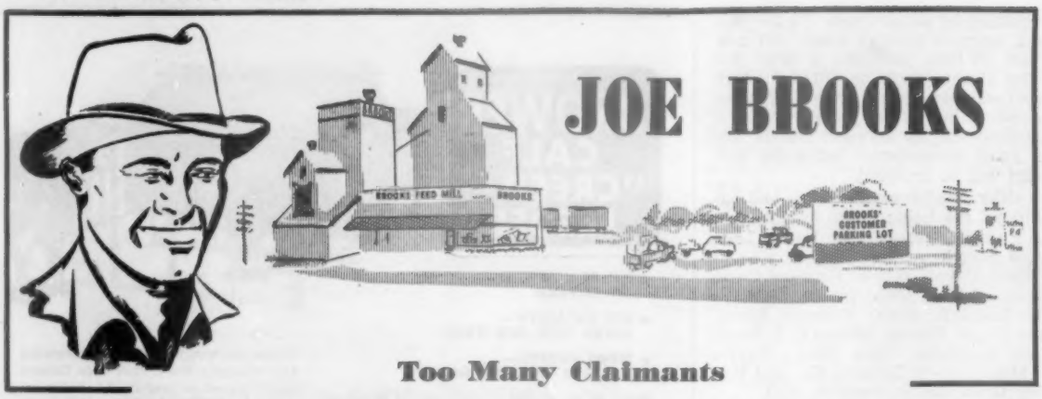

Too Many Claimants

The winter day was grey and there was the threat of more snow which would add to the difficulty of traveling the already snow-crusted highways, with their steep banks of old snow. Milt Peters and Pop Henley were arranging a power mower display in the sales room, as it was Joe's idea that by getting such items out on display before spring, one got the early sales, just like the early birds get the choicest worms.

"Hey, Pop, isn't that Mrs. Jenkins going into Joe's office?" Milt asked. "And didn't she lose her husband about two months ago? She is quite a looker yet. Farm work didn't make a hag out of her."

Pop Henley clucked his tongue. "Is your mind always thinking things like that? How dull. We've been selling feed to the Jenkins' for many years. They've got two fine boys over Bunker County way. If they wasn't so far away I'll bet we'd sell them feed, too."

In Joe's office, Mrs. Jenkins, a tall, brown haired woman who was about 47, seemed ill at ease. "Sit down, Mrs. Jenkins," Joe said warmly. He had been one of the pallbearers at her husband's funeral and knew the whole family quite well.

The woman sat down and her gloved hands fidgeted with her purse. "I'm in trouble, Mr. Brooks," she said, her eyes downcast. "And I want some advice."

Joe's heart beat a little faster. He knew from experience that when a woman said she was in trouble, it could mean little or big trouble, and he was hoping it wasn't big, for he liked the Jenkins family and figured they had had enough sorrow in the death of a hard working father and husband.

"I'm sorry to hear you've got trouble, Mrs. Jenkins," he said. "I hope it isn't serious."

Mrs. Jenkins Is Upset

"It's got me all upset, Mr. Brooks. You know how much Mort and me always thought of our children. N—now that Mort is gone, the two boys and their wives act different."

"In what way?"

She hesitated only for a second. "Well, they want to get their shares of the farm and all the possessions. And they seem to be so unreasonable. Under the law, I have a widow's right to the use of the homestead, and the children get two thirds of the estate, with me one third. We're not arguin' about that. It's the personal possessions that we are quarreling about. You've always been a good friend of Mort's—I wanted to see you first, in case more trouble develops."

"I see," Joe mused, not wanting to ask more questions.

"It's the wives that are most insistent," the farm woman said, tears in her eyes. "They want some of the household possessions. Like the new chair we all bought for Dad two years ago. And the davenport that's only four years old. Our best silverware, too, and some of the dishes. They act hurt when I say I'd like to keep some of those things. But the things they want most, I want, too."

"What is that?"

"The television set. It's only three years old, and it's scratched a lot where the dog and cat fought, but Mort and I spent so many happy evenings together watchin' television, I sort of want to keep—" her voice trailed off, and silence settled in the feed office.

Joe nodded in understanding.

"I won't give up that television set," Mrs. Jenkins said. "Not if they never come to see me again for a long time. To think that my own sons would let their wives do a thing like this to me, and never raise their voices—"

"Yes, it's too bad," Joe said, "but have you told them how much this set means to you?"

Mrs. Jenkins dabbed at her eyes. "Yes, several times, but they don't care. They just want it because they don't want to spend money to get sets of their own. I don't know how they'll settle ownership of the set if they get it away from me—as if they ever would. But they are both strapped for money. It's hard for young farmers to get started these days."

Joe looked very thoughtful for a moment.

"I thought," Mrs. Jenkins said hopefully. "I thought you might tell me what to do, Joe. You always seemed to have the right answer when Mort and I had problems with our chickens and cows."

"I'm glad I did have a couple of answers then," Joe said, "but this is what they call a horse of a different color, Mrs. Jenkins. It really is a tough problem."

Joe Has an Idea

Both Mrs. Jenkins and Joe were silent for a few moments and then Joe suddenly slapped his knee. "Mrs.

(Continued on page 25)

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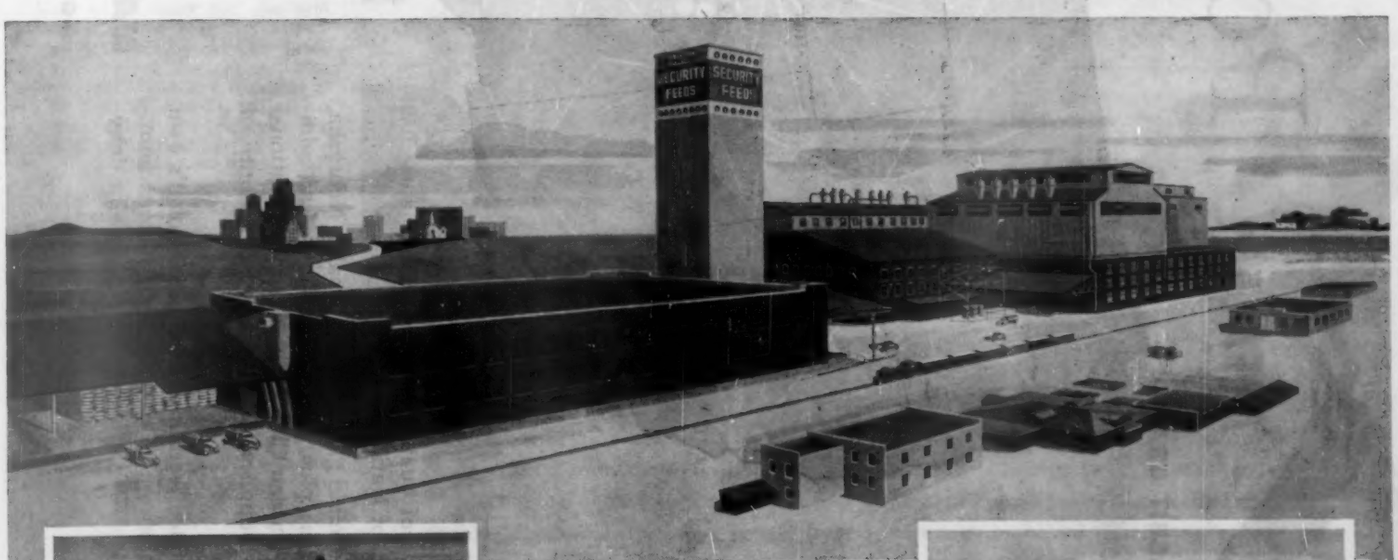
Security Mills actively assumed the role of leader in the broiler industry, helping in the growth of broiler areas and breeding flocks all over the South.

The story goes on and on. Turkeys, rabbits, layers, beef cattle, dogs—Security has feed and a feeding program for every bird and animal on the Southern farm.

In this, its fiftieth year, Security Mills wants to thank the thousands of customers that have made its growth possible.

SECURITY 50 MILLS, INC.



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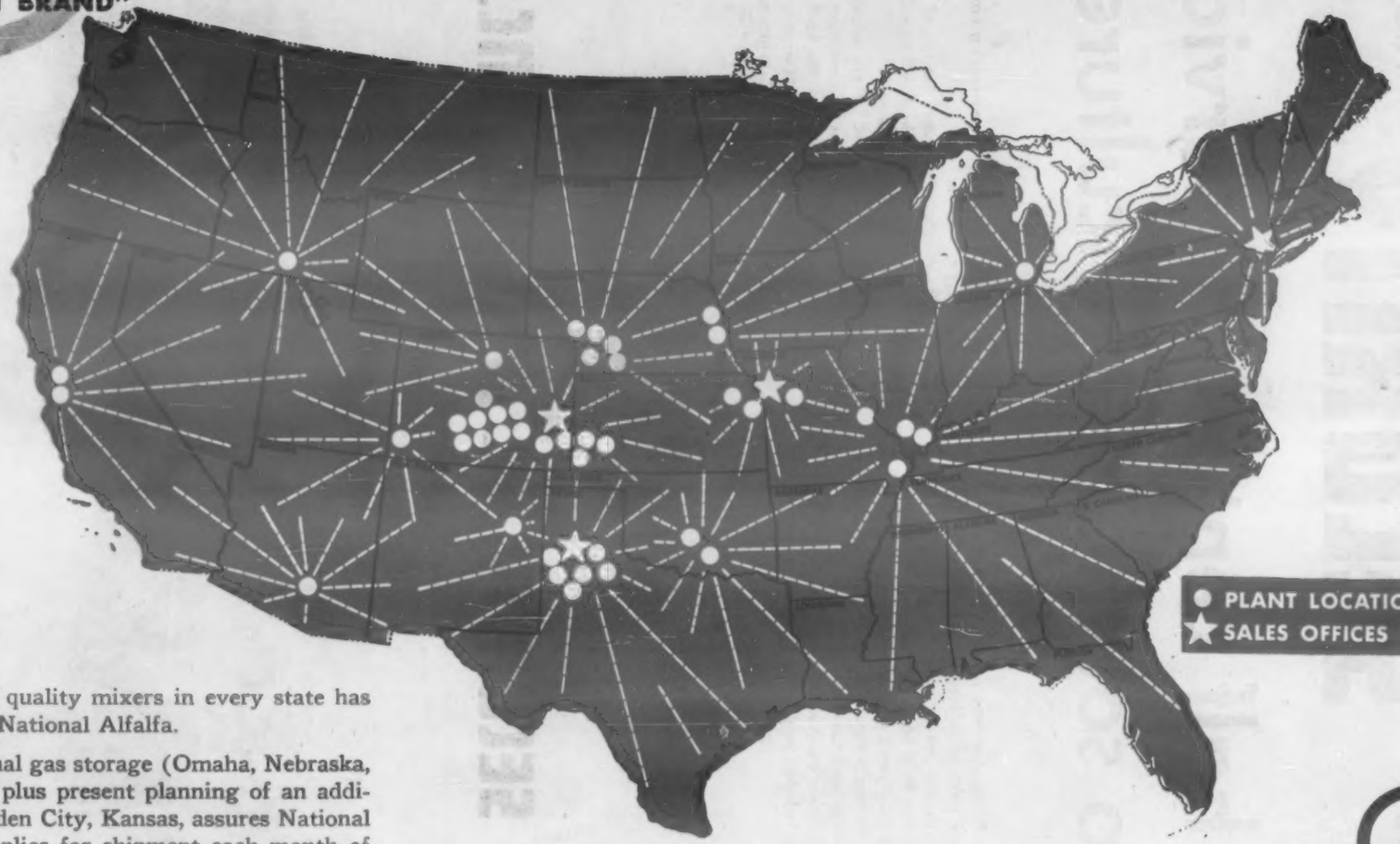
JACKSONVILLE TAMPA

SECURITY FEEDS—YOUR SECURITY FOR THE FUTURE

NATIONAL ALFALFA

"JACK RABBIT BRAND"

Popular in Every State



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TO BETTER SERVE THE FEED INDUSTRY

NATIONAL ALFALFA DEHYDRATING AND MILLING COMPANY

ACROSS THE LAND

GENERAL SALES OFFICES: BOARD OF TRADE BUILDING • KANSAS CITY 5, MO.

Jenkins, are you willing to part with some of your other personal effects to keep the television set?"

"Why, yes," she said, "I have an extra bedroom set. I won't be needing that."

"And is there anything else on the farm you could sell?"

"Well, I have a hundred bushels or so of potatoes in the cellar," she admitted. "The boys said I could have this year's crop, that they would claim a share in the next crop. Why do you ask, Mr. Brooks, about selling things?"

Joe grinned. "Mrs. Jenkins, your television set is three to four years old, you say. I know a television dealer in town who is a very good friend of mine. I am sure that if I asked him he could find two sets just like yours, used ones of course."

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The widow looked very puzzled, as though she could not understand Joe's suggestion. "Look here, Mrs. Jenkins," he said. "You love those sons of yours, don't you? You want to stay on good terms with them?"

"Oh, yes, yes," said the woman dabbing her eyes. "They are good boys."

Used Sets

"Well, then sell some of those surplus potatoes, and maybe a few eggs and cull hens, and I'll see if I can't get that television man to get you two sets just like yours—used. Folks are always trading in sets nowadays."

Mrs. Jenkins looked hopeful. "Maybe then they would be satisfied," she said. "Both their wives want sets so badly. Maybe they would like me—if I gave them something like that. And it wouldn't cost me too much."

"A happy united family is worth a lot, Mrs. Jenkins," Joe said. "At least it is worth a try."

"I'll do it," Mrs. Jenkins said suddenly. "I will! I will! I can't thank you enough, Joe. I would never have thought of this by myself. I was so—so mad at them. But it is the best way. I don't want anybody to hate me, and I don't want to hate anybody, either."

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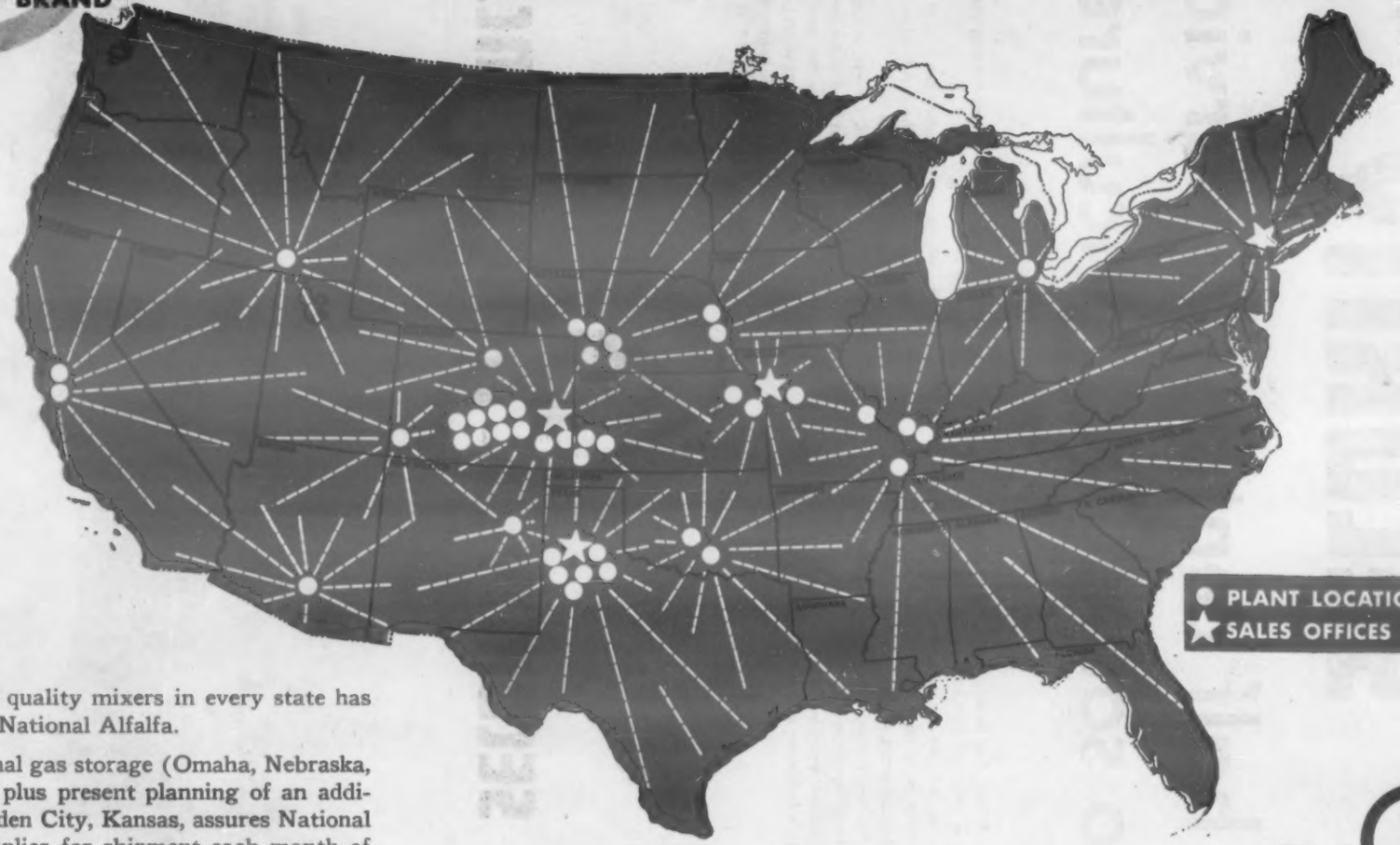

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Anti-
Bacterial

MORE than just a coccidiostat

Your customers need more than just coccidiosis protection. They need NFZ—the only coccidiostat that provides superior coccidiosis protection PLUS the power to destroy bacteria associated with other poultry diseases. This two-way protection for your customers means healthier birds . . . improved feed efficiency . . . more uniform flocks . . . bigger profits.

NFZ means complete safety, too. NFZ's exclusive molecular structure prevents it from entering the tissue in measurable amounts. Thus NFZ *is never a stress factor and can be fed to birds of any age without affecting layability, shell texture, fertility, or hatchability.* In addition, NFZ is non-toxic to all livestock and pets—there's no danger from contaminating other feeds.

Give your poultrymen the kind of protection they need with double-action NFZ. NFZ and *only* NFZ permits the development of a natural, permanent immunity at both preventive and treatment levels, and at the same time, destroys many harmful secondary invaders. Truly, it's *more* than just a coccidiostat.

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Free-flowing, non-dusting Tecmangam is the clean, economical way to add manganese to feeds deficient in this element. It contains 70% manganese sulphate, is completely soluble and readily assimilated. Use at least one pound per ton of feed.

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chinery Manufacturers Assn.; Edgewater Beach Hotel, Chicago; sec., Raymond J. Walter, 511 Fifth Ave., New York 17, N.Y.

Feb. 17 — Washington State Feed Assn.; Chinook Hotel, Yakima; sec., John G. Wilson, 814 Second Ave. Bldg., Seattle 4, Wash.

Feb. 19-21—Colorado Grain, Milling & Feed Dealers Assn.; Shirley-Savoy Hotel, Denver; sec., R. B. Kelley, 605 Bining Exchange Bldg., Denver, Colo.

Feb. 19-21 — Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., L. E. Folsom, 222 Chatham Rd., Columbus 14, Ohio.

Feb. 22 — Mutual Millers & Feed Dealers Assn.; Hotel Statler, Buffalo, N.Y.; sec., Mrs. G. A. Bentley, 41 Chautauqua Ave., Jamestown, N.Y.

Feb. 22-23 — Virginia Polytechnic Inst. Nutrition School; Hotel Roanoke, Roanoke, Va.; chmn., Paul M. Reaves, V. P. I., Blacksburg, Va.

Feb. 27-28 — Midwest Feed Mfrs. Assn.; Hotel Muehlebach, Kansas City; exec. V. P., Lloyd S. Larson, 20 West Ninth Street Bldg., Kansas City, Mo.

March 7 — Distillers Feed Conference; Sheraton-Gibson Hotel, Cincinnati, Ohio; sec., Lawrence Carpenter, 1232 Enquirer Bldg., Cincinnati 2, Ohio.

March 15-16—Oregon Feed & Seed Dealers Assn.; Multnomah Hotel, Portland; sec., Leon Jackson, 809 Lewis Bldg., Portland 4, Ore.

March 18-19—Quad-State Convention sponsored by Sioux City Grain, Feed & Seed Assn.; Martin Hotel, Sioux City, Iowa; sec., N. G. Nichols, 901 Missouri River Road, Sioux City, Iowa.

March 18-23 — Grain Elevator & Processing Superintendents; Muehlebach Hotel, Kansas City, Mo.; sec., Dean M. Clark, "Grain," Board of Trade, Chicago 4, Ill.

March 22-23—Maryland Nutrition Conference for Feed Mfrs.; Shoreham Hotel, Washington, D.C.; chmn., Dr. G. L. Romoser, U. of Md., College Park, Md.

March 29—Illinois Swine Growers Day; U. of Ill., Urbana; chmn., S. W. Terrill, Dept. of Animal Science, U. of Ill., Urbana, Ill.

April 3—Purdue Egg Day; Lafayette, Ind.; chmn., David D. Jackson, Ind. Agricultural Extension Service, Lafayette, Ind.

April 5—Texas Feed Manufacturers, Hotel Texas, Ft. Worth; sec., Monroe U. May, P.O. Box 6666, Dallas 19, Texas.

April 6-7 — Texas Grain & Feed Dealers Assn., Hotel Texas, Ft. Worth; sec., Ben Ferguson, 614 Meacham Bldg., Ft. Worth 2, Texas.

April 9-11—American Assn. of Feed Microscopists; Deming Hotel, Terre Haute, Ind.; sec., Robert C. Wornick, Chas. Pfizer & Co., Terre Haute, Ind.

April 12-14—California Hay, Grain & Feed Dealers Assn.; Ambassador Hotel, Los Angeles; chmn., Jack Flammer, 5935 So. Malt Ave., Los Angeles 22, Cal.

April 12-18—National Fisheries Institute; 4-Most Hotels, Miami Beach, Fla.; mgr., Mal Xavier, 1614 20th St., N.W., Washington 9, D.C.

April 16-17 — Nebraska Grain & Feed Dealers Assn.; Hotel Cornhusker, Lincoln; sec., Howard W. Elm, 917 Trust Bldg., Lincoln, Neb.

May 3-5 — Kansas Grain & Feed Dealers Assn.; Kansan Hotel, Topeka; sec., O. E. Case, 901 Wiley Bldg., Hutchinson, Kansas.

May 13-14—Missouri Grain, Feed & Seed Assn.; Kentwood Arms Hotel, Springfield; Sec., D. A. Meinershagen, Higginsville, Mo.

May 21-22 — National Cottonseed Products Assn.; Statler-Hilton Hotel, Dallas; sec., John F. Moloney, 19 S. Cleveland St., Memphis, Tenn.

May 23-25—American Feed Manufacturers Assn.; Morrison Hotel, Chicago; sec., W. T. Diamond, 53 West Jackson Blvd., Chicago 4, Ill.

June 4-5 — Eastern Federation of Feed Merchants; Hotel Commodore, New York; sec., Howard J. Benson, Eastern Federation of Feed Merchants, Sherburne, N.Y.

June 4-5—Georgia Feed & Poultry Conference; Dinkler Plaza Hotel, Atlanta; sec., Will L. Kinard, 208 William-Oliver Bldg., Atlanta 3, Ga.

June 6-9 — Grain Processing Machinery Manufacturers Assn.; French Lick Springs Hotel, French Lick, Ind.; sec., Raymond J. Walter, 511 Fifth Avenue, New York 17, N.Y.

June 11-12 — Montana Nutrition Conference; Montana State College, Bozeman; chmn., O. O. Thomas, Montana State College Agricultural Experiment Station, Bozeman, Mont.

June 15—Pacific Northwest Grain Dealers Assn.; Davenport Hotel, Spokane, Wash.; sec., Pete Stallcop, 418 Peyton Bldg., Spokane, Wash.

June 17-19—Indiana Grain & Feed Dealers Assn.; Purdue Union Bldg., Purdue University, Lafayette, Ind.; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

June 28-30—Association of Southern Feed & Fertilizer Control Officials; Hotel Roanoke, Roanoke, Va.; sec., Bruce Poundstone, U. of Ky. Agricultural Experiment Station, Lexington 29, Ky.

Aug. 13-14 — Wisconsin Nutrition School for Feed Men; U. of Wis., Madison; Chmn., Gus Bohstedt, Dept. of Animal Husbandry, U. of Wis. College of Agriculture, Madison, Wis.

Oct. 4-5—Texas Nutrition Conference; Texas A&M, College Station, Texas; chmn., J. R. Couch, Dept. of Poultry Husbandry, Texas Agricultural & Mechanical College, College Station, Texas.

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CHECK THESE ADVANTAGES OF NOPCO-PAK

Nopco-Paks are checked for *compatibility*. Before your order is accepted, your formula is carefully examined to find whether the ingredients will "live together." If they can't, we notify you and suggest alternatives.

Nopco-Pak formulas are studied to develop the best manufacturing procedure. We select the one that assures you of maximum vitamin potency and dependable stability even under adverse storage conditions.

Nopco-Paks contain Micratized® Vitamins A & D, truly stable even when subjected to heat and difficult ingredients. Photo shows Micratized vitamins passing the hot plate test while another vitamin product reaches the melting point.

Nopco-Pak represents only a small part of the cost of a bag of feed. But it activates the ration, sparks the efficiency. Only the best is good enough for this vital function. Depend on Nopco-Pak, blended to your specifications.

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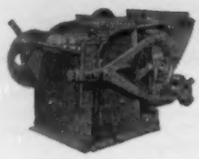
EHRSAM
feed mill equipment
for
dependable and
economical
performance



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Many operators have found by actual experience that Ehrsam machinery and equipment does the job fast and well at minimum expense. Ehrsam's continuous research program assures you of equipment designed to meet modern standards, for the most efficient, low-cost operation.

Ehrsam sales engineers are eager to help you solve your planning and operating problems. Please feel free to call them at any time.

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WHEAT GERM OIL
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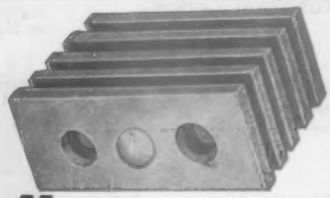
AGRI-TECH ALFALFA PRODUCTS

INQUIRIES APPRECIATED

EARLY METHODS

for grinding grain were slow, arduous jobs, often powered by human energy. An ingenious device was this foot-driven pestle which pounded whole grains to bits in a stone mortar. The end result was crude and uneven with hull and chaff mashed in with the meal.



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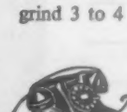

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Duluth, Minnesota • Billings, Montana

Feeding and Management Systems For Growing Pullets and Their Effect on Adult Performance

By DR. E. P. SINGSEN
University of Connecticut

EDITOR'S NOTE: Dr. E. P. Singsen of the University of Connecticut points out that interest has increased in feeding and management systems for pullets and their effect on laying house performance, and in the accompanying article he discusses and summarizes various findings on the subject. Included are data and comments on restricted feeding results. This article is the text of a report presented by Dr. Singsen at the Texas Nutrition Conference.

The influence of nutrient level and feed system on the growth, livability and production costs of a replacement pullet and the influence of these practices on the laying house performance of that pullet have been a subject of discussion among poultrymen for generations.

Interest in this subject has intensified during the last 10 years as a result of genetic improvements with respect to early growth rate and dietary improvements in terms of nutritionally complete and more highly digestible feeds.

These factors, along with certain management practices, have tended to speed up the development of the pullets which, in the eyes of many poultrymen, is an undesirable development.

In Table 1 are listed a number of factors affecting the development of a replacement pullet. The influence of these factors on economically important characteristics such as age at sexual maturity, feed costs, egg size, livability and both total egg production and the distribution of egg production throughout the year must be considered.

Consider Other Factors

Although the primary purpose of this report is to discuss the effect of nutrition and feeding practices on the developing pullet, it is absolutely

(Continued on page 58)

Table 1—Factors Affecting the Development of a Replacement Pullet

1. Genetics
2. Season of hatch
3. Amount of light
4. Disease
5. Nutrition
   - A. Nutritionally complete vs. deficient rations
   - B. Total nutrient intake
   - C. Protein and mineral levels
6. Feeding practices
   - A. Controlling 5A, B and C by feed formulation
   - B. Feed restriction vs. full feed

   Factors 5A, B and C may be influenced by controlling feed intake by weight, by time, or by bulk.
7. General management practices

Table 2—Effect of Date of Hatch on Age at Sexual Maturity and Egg Size*

Month hatched	Days to 25% production	% large eggs (12 mo. prod.)
January	164	87.1
February	172	86.5
March	184	89.0
April	187	93.1
May	189	94.1
June	195	93.8
July	190	86.4
August	202	93.6
September	200	93.4
October	179	80.2
November	150	78.5
December	147	73.3

*Skoglund, Univ. of Delaware.

Table 3—The Effect of Feeding Pullets to 20 Weeks of Age a Complete Ration vs. One Without Antibiotics and a Source of Unknown Growth Factors (Sunde, et al, Univ. of Wisconsin), White Leghorns

	Mortality %	Laying house performance: Eggs per hen housed	Average days to first egg	% Hatchability
1951-52				
Complete	16.7	178.3	167.1	90.5
Incomplete	21.0	176.8	179.2	91.8
1952-53				
Complete	11.4	196.1	159.2	92.1
Incomplete	10.8	186.0	170.2	92.2

From the 1952-53 data on total eggs laid during	20-28th weeks	20-52nd weeks
Complete	598	2853
Incomplete	446	2835

Table 4—The Effect of Type of Feed and Feed Restriction on Developing Pullets and Their Subsequent Laying Performance (Barred Plymouth Rocks, Univ. of Connecticut)

Growing period (12 to 24 weeks age)	Lot 1	Lot 2	Lot 3	Lot 4
Body weight—12 weeks	3.03	3.03	3.00	3.10
(lb.)—24 weeks	5.01	4.41	4.45	4.47
Feed efficiency	9.85	10.30	15.59	16.57
Total feed/bird (12-24 weeks)	19.50	14.90	22.60	22.70
Mortality (%)	12*	7*	0	3
Age at 50% production	174	180	180	184
Laying period (336 days)				
Average production (%)	55.1	56.9	54.4	57.9
Feed/doz. eggs (lb.)	7.27	7.22	7.60	7.24
Body weight (at 24 weeks)	5.10	4.50	4.60	4.60
(lb.) (at 72 weeks)	5.90	5.30	5.30	6.00
Mortality (%)	13.3	10.3	13.1	14.6
Egg weight (gm.) (at 24 weeks)	47.8	48.1	49.2	49.6
(at 48 weeks)	59.3	58.9	59.7	59.6

*Coccidiosis outbreak in two lots.

Rations fed during growing period

Lot 1. High efficiency, all mash-ration.
2. Same as Lot 1, but restricted to 80%, by weight, of feed eaten by Lot 1.
3. Low efficiency, all-mash ration.
4. 30% of Lot 3 ration, fed as all mash.
   70% ground oats, fed as all mash.

High efficiency ration fed to all lots in the laying house.

Table 5—High Energy vs. Low Energy Rations for Growing Pullets and Their Effects on Subsequent Laying House Performance (Hy-Line Poultry Farms, Hy-Line Pullets)

Growing ration	Laying house performance—range reared birds (10 tests): Feed/100 birds/day	Av. hen day egg prod. (%)	Flock depletion (%)	Livability index
High energy	24.6	64.1	17.3	90.6
Low energy	24.5	62.7	14.6	93.1
	Laying house performance—confinement reared birds (6 tests)			
High energy	23.6	49.9	12.3	91.8
Low energy	24.0	41.4	11.6	93.1

Table 6—The Effect on Laying House Performance of Full Feeding vs. ⅔ of Full Feeding for Pullets Reared on Range (Hy-Line Poultry Farms, Four Tests)

Range treatment	Laying house performance: Feed/100 birds/day	Av. hen day egg prod. (%)	Flock depletion (%)	Livability index
Full feed	24.6	58.5	10.5	88.00
% of full feed	25.6	64.9	14.6	93.35

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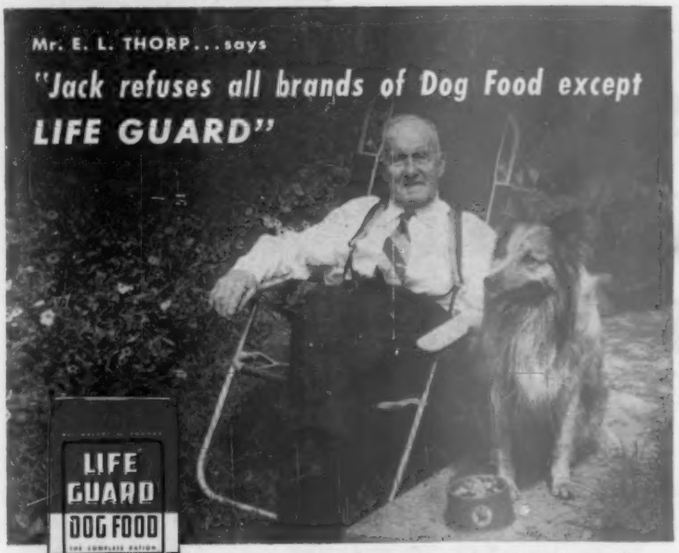

Bridgeport, W. Va.
Feb. 22, 1955

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Handling Systems Analyzed

Manpower Requirements in Handling Sacked Materials

What are the manpower requirements in different systems of handling sacked ingredients or sacked finished feeds? How do the systems compare?

These questions and their answers made up part of a talk given by Richard Sheehy of the Quaker Oats Co., Chicago, at the last Midwest Feed Production School in Kansas City, sponsored by the Midwest Feed Manufacturers Assn.

Mr. Sheehy, feed production supervisor for Quaker Oats, described the results of a study of methods of handling sacked materials. The study applied specifically to sacked ingredients, but the findings also related to the handling of finished feeds.

In his discussion of sacked materials handling, Mr. Sheehy first pointed out that many feed manufacturers today are not able to handle bulk materials for one reason or another. And those who do have bulk operations obviously cannot have a 100% bulk plant because some of the ingredients will be handled in small quantities that will not justify bulk handling.

Also, almost all feed plants handle finished feed in bags.

For these reasons, a study of sacked materials handling is of interest to all feed mill operators.

For many years, Mr. Sheehy noted, incoming sacked ingredients have been unloaded by hand from railroad cars or trucks. In almost all cases, this is still true today. There are a few cases of inter-plant shipments where sacked materials are shipped on special pallets, the entire pallet being unloaded mechanically at destination.

Two Operations

"At present, however, I know of no arrangement whereby regular suppliers ship their products on pallets," Mr. Sheehy said. "We are then still saddled with the necessity of unloading cars or trucks by hand. Admitting that we are stuck with this operation immediately gets us to the two fundamental operations involved in handling sacks — (1) piling or unpiling and (2) transportation.

"Starting with these two concepts, the essential things to keep in mind when analyzing a material handling problem are: (1) How many sacks can a man load or unload in a given time, and (2) how much time is spent in moving the sacks from one point to another?"

Several years ago, Mr. Sheehy explained, Quaker Oats undertook an involved study in handling methods in an effort to establish the most efficient operation possible. The study, he said, really boiled down to a number of ideas or facts which everyone had long considered but had never really thoroughly analyzed.

Four Systems

It may be noted first that there are four fundamental systems for handling sacked materials:

1. The manual system—where the operator literally carries a sack from one point to another, taking it from one pile and placing it on another.

2. The hand truck system—where the operator loads a truck, pushes or pulls it a certain distance and unloads it by hand.

3. The conveyor system—where the operator, either or both, places sacks on and takes sacks off a conveyor belt that moves from one point to another.

4. The fork truck system—where the operator piles or unpiles and transports over any distance unit pallet loads of sacks.

In analyzing costs for each system, Mr. Sheehy said, it is necessary to start with certain facts applying to each system.

First, the following analysis is confined to the handling of 100-lb. sacks since the package will apply to both ingredients and finished feeds.

It's assumed that a man can lift and put down 200 sacks per hour. This figure may sound high, but it should be noted that this involves only piling and unpiling, with no walking or moving from point to point. It's also assumed that a man in an average plant can travel or walk at a rate of 240 ft. per minute.

The problem will be to unload a box car containing 600 sacks of ingredients and move them to a storage area 240 ft. away.

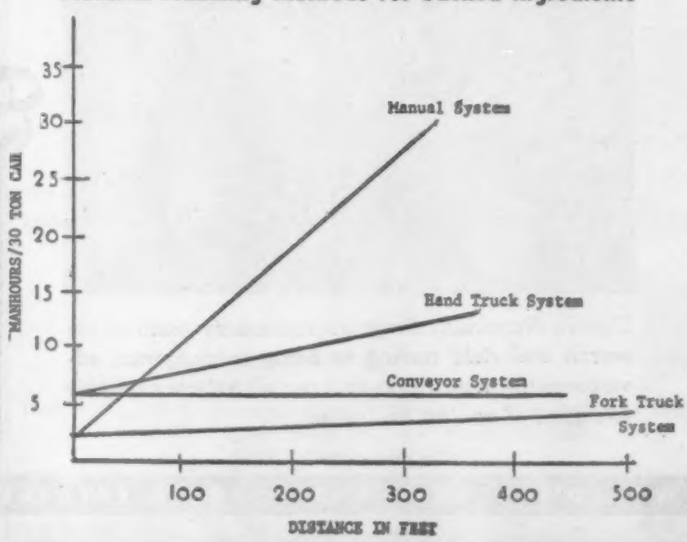
Manual System—If a man can pile up sacks at a rate of 200 per hour, it will take him three hours to finish the 600-sack car. If he travels 240 ft. per minute and it is 240 ft. from car to storage area, it will take 600 one-minute trips to the storage area and 600 one-minute trips back to the car. This adds up to 20 hours. All totaled, 23 man-hours have been spent to unload the car.

Obviously, this method is not a common practice in many mills, but it serves as an example of the first fundamental system of handling sacks. Mr. Sheehy drew a curve representing this system, using varying distances and varying numbers of sacks. (See graph on this page.)

Hand Truck System — The next fundamental system is the two-wheel

(Continued on page 36)

Material Handling Methods for Sacked Ingredients



What is a Farmer?

Well, that depends entirely on where you stand:

To his wife, he's a big eater, a heavy sleeper and a worry.
To his minister, he's a believer in God in nature, and nature in God.
To a politician, he's a someone you talk about during elections.
To a business man, he's a customer.
To the banker, he's a depositor.
To his neighbors, he's a friend.
To his children, he's a man who always has a chore for them.
To his dog, he's a man with a quiet voice.
To the grocer, he's a God-send.
To the dairy operator, he's a name on a milk check.
To the insurance agent, he's a big risk.
To the mechanic, he's a mechanical wizard who fixes things himself.
To the doctor, he's a physical wonder.
And to himself, well, only he can tell you that but chances are, he won't.

You see, it depends entirely on how you look at him. Actually, the farmer is all of these —and more. For one thing, he's just about as close to being an independent business man as one can be these days. The farmer is pretty much his own boss, and what he makes, he makes by the sweat of his own brow. Each year he has to gamble with nature as to whether or not he'll have a crop. If nature wins, the farmer loses—if the farmer wins, then nature has been kind. He's quite a man, this farmer of ours!

Now, in addition to filling America's food basket, the farmer also supplies American industry, for over 75% of our total farm crop is changed in form for the consumer and industry by companies like Cargill, companies known as Creative Processors.

The job of the American Farmer is to grow America's food and industrial raw materials. The job of Creative Processors like Cargill, is to get the crop to market and if it needs processing before it can be marketed, to process it. In short, our job is to help the farmer find new, easier ways of farming and to find and create markets for his crops.

We at Cargill are proud to be the number-two man on this farmer-processor team, and we pledge ourselves to continued support and assistance to our free farm economy. We further pledge ourselves to constant research so that we may continue to deserve our reputation as friend, neighbor and Creative Processor to the American Farmer.

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ANNOUNCING—*a new campaign to focus attention on the feed industry —its service to agriculture*

With the message on the facing page, which will appear during February in all leading national farm magazines, Pfizer salutes one of America's most important manufacturing industries.

No industry is more deserving of a place in the sun. No industry seems destined for faster growth. Few industries have brought so many lasting benefits, to so many people, in so short a time as have Feed Manufacturers.

Through their furtherance of nutritional research, and their prompt and practical application of new developments to "*bring science to the farm in a feed bag*" they have, in the past few years, helped to revolutionize livestock and poultry production in America.

* * *

This is the keynote ad in a new series, appearing monthly, which will deal specifically with many of the newest and most newsworthy advances in feeds and feeding.

Since Pfizer supplies so many of the health and growth-promoting ingredients that are now brought to the farm in a feed bag, this series will help further a mutual objective:

. . . to help focus still more attention on the benefits of today's scientifically formulated feeds . . . and to help make possible still greater growth for the progressive feed companies that make these benefits available!

Pfizer

Chas. Pfizer & Co., Inc.
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SCIENCE COMES TO THE FARM IN A FEED BAG

It may *look* like the same kind of feed you could have bought ten years ago.

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But few things have changed so much—or brought so much change to American Agriculture.

For inside a bag of today's scientifically blended feeds is the knowledge gained from years of fruitful research . . . at Agricultural Experiment Stations . . . in laboratories . . . on proving farms.

The carefully balanced vitamins, minerals, antibiotics and other health- and growth-promoting ingredients in today's fine feeds help you produce more meat, milk and eggs . . . in less time . . . on less feed . . . and with less risk than even the scientists themselves—until recently—ever dreamed possible.

By putting so many nutritional discoveries into practical form—and by making them available—the feed industry has helped American farmers cut weeks off the time it takes to raise a broiler . . . months off the time it takes to make a market-weight hog, turkey, or beef steer . . . has helped to raise egg production by a hundred eggs per hen, per year.

As America's progressive feed companies bring each new development of science to the farm in a feed bag they bring to *every* livestock and poultry producer the ability to better, each year, his own best production record for the year before.

And as a fast-growing nation looks to America's poultry and livestock producers for *still greater* food production in the future, you can look to your feed man to bring you the benefits of future research that will help make it possible.

From an address by John E. McKeen, President, Chas. Pfizer & Co., Inc.

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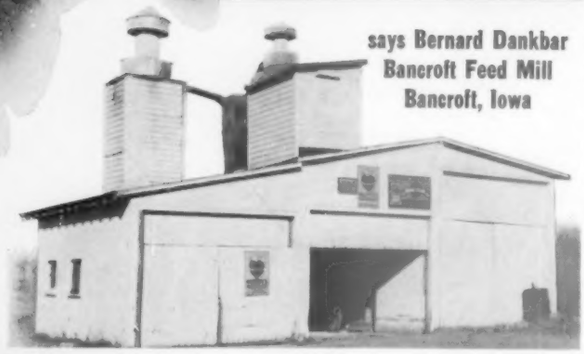

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hand truck method, which is used widely in many mills. Here, a worker must pile up sacks twice—once on the truck and once from the truck to the storage dump. Three hours piling time would be spent in the first system. Now, with the hand truck system, there is a six-hour time for piling.

However, five sacks will be moved in each truck load in the same time one is moved by the hand method. To move 600 sacks five at a time will require 120 round trips instead of 600, so the total travel time will now be only four hours. And the total time for the whole operation is 10 hours.

When this is put on the graph, a noticeable improvement is shown.

It may be noticed that there is a small area on the left side of the graph showing the only range where a hand operation still has the edge over the other systems.

Conveyor System — Mr. Sheehy moved on to the third system—the conveyor system—where a new concept has to be set up. When a conveyor is used to move sacks from one point to another, travel time becomes zero. This is because the discussion involves only human travel time and not sack travel time.

With the conveyor extending into the car, a man has to place sacks on it. At 200 sacks per hour, it will take him three hours to finish the car. If the tail end of the conveyor discharges at the storage area, it will take another man three hours to repile the sacks for storage. Total time spent is 6 man-hours.

When this operation is put on the graph, it is immediately obvious that improved efficiency has been gained. It may be noted that with this system, the graph shows a perfectly horizontal line. In other words, it doesn't make any difference how far the sacks have to be moved because total man-hours remain the same.

Fork Truck System — The fourth system analyzed is the fork truck method. If a pallet is set right in the box car, it is still necessary to unload sacks by hand and pile them on the pallet. Thus, it is already established that this operation will take three hours. Travel time could be as much as 720 ft./min., and 20 sacks per pallet is not too much to expect. When these figures are worked out, it is found that total travel time to unload the car is only 20 minutes.

Since the pallets have only to be set down at the storage dump, no time is considered for a second piling operation. Thus the total time taken for unloading the car is 3⅓ man-hours. For the job described, the fork truck system clearly leads all the rest in number of man-hours required, Mr. Sheehy pointed out.

Conclusions

Referring to all the curves on the graph, Mr. Sheehy analyzed the findings and drew certain conclusions:

1. There does exist an area in which it is more economical simply to carry sacks than to use a conveyor or even a two-wheel truck.

2. It is always more efficient to use a conveyor system than the two-wheel truck if, when using the truck, sacks have to be piled up at the storage area.

3. It is always more efficient to use the fork truck system than either the manual or two-wheel truck system.

4. The fork truck system is more efficient than the conveyor system except where long distances are involved. This can be seen in the slight upward slope of the curve for the fork truck as opposed to the horizontal line representing the conveyor system. If the line for the fork truck system were extended far enough to represent greater distances, it would meet and then go above the line for the conveyor system.

The foregoing discussion, Mr. Sheehy pointed out, is confined to manpower efficiency. By comparing the difference in manpower efficiency and considering the magnitude of his operation, a feed mill operator should be able to determine what the best system would be for him from a capital investment point of view, Mr. Sheehy said.

Dr. John W. West

POULTRY CHIEF — Dr. John W. West has been appointed head of the poultry department of Oklahoma A&M College, Stillwater. He fills a vacancy created by the retirement last summer of Prof. R. B. Thompson, who had held the post for 32 years. Dr. West, 32, has been associate professor of poultry husbandry at Mississippi State College. He received his bachelor's and master's degrees from the University of Tennessee, and he received his Ph. D. degree from Purdue University in 1951. Dr. West is a member of the Poultry Science Assn. and has been active in various other organizations. Prof. Cecil Roberts has been acting head of the Oklahoma poultry department during the past few months.

2 Grain Companies In Missouri Merge

ST. JOSEPH, MO. — A merger of the M. F. A. Cooperative Grain & Feed Co., St. Joseph, Mo., and the Producers Grain Commission Co., St. Louis, to form the grain and feed division of the Missouri Farmers Association, Inc., has been made effective. The general offices of the new division will be at 429 Cherokee St., St. Joseph. A. J. Loutch, general manager of the M. F. A. Cooperative Grain & Feed Co., will be general manager of the new corporation.

The M. F. A. has a grain marketing office at Kansas City and a soybean processing plant at Mexico, Mo. The newly-formed group will construct a 1,000,000-bu. river-rail terminal at Louisiana, Mo., which is expected to open Aug. 1.

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New studies by three colleges show

up to $81.80 more profit per 1,000 broilers from feeds containing. . . . .

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Proof that adding 2½ to 3% dried whey to a well-fortified basal ration can mean $16 to $81 more income over feed cost per 1,000 birds.

DRIED whey in the broiler ration puts extra growth on the birds and extra profit in the till, according to the results of eight recent college feeding trials.

In these experiments, the addition of dried whey alone to good basal rations produced increases in income over feed cost ranging from $16.87 to $81.80 per 1,000 broilers. The average of the eight experiments was $51.94.

Reductions in pounds of feed per pound of gain showed an average saving of 14 lbs. of feed per 100 lbs. gain.

Growth rate was stepped up by 0.39 of a pound per bird in 10-week growing periods, comparing good basal rations with basal plus dried whey.

Note in the first of the accompanying tables how dried whey improved feed conversion from 2.66 to 2.62; and how income over cost of feed jumped from $400.15 with basal alone to $439.22 with whey added to the basal.

Even when the same basal ration was further fortified with fish solubles and distillers dried solubles, dried whey substantially increased profit and performance, as table shows.

Write for complete details of these feeding results. See how a few cents invested in whey per bag of finished feed can mean extra sales . . . especially repeat sales. Peebles' spray dried whey is available the year around, and uniform from season to season.

TREATMENT	AVE. 10 WK. WT. (LBS.)	FEED GAIN
Basal	3.42	2.66
3% Fish Solubles (FS)	3.68	2.62
3% Dried Whey (DW)	3.68	
3% Distillers Dried Solubles (DDS)	3.62	2.60
3% FS & 3% DW	3.78	2.62
3% FS & 3% DDS	3.72	2.57
3% DW & 3% DDS	3.75	2.58
3% FS & 3% DW & 3% DDS	3.86	2.60

Dried whey at 3% level either alone or in combination with suppliers of other unidentified factors, increases profit over feed cost.

RESULTS USING 3% DRIED WHEY

TREATMENT	INCOME	FEED COST	INCOME OVER FEED COST
Basal	$855.00	$454.85	$400.15
3% FS	920.00	493.37	426.63
3% DW	920.00	490.78	439.22
3% DDS	905.00	472.48	432.52
3% FS & 3% DW	945.00	508.08	436.92
3% FS & 3% DDS	930.00	482.78	447.22
3% DW & 3% DDS	937.50	493.43	444.07
3% FS & 3% DW & 3% DDS	965.00	516.85	448.15

Per 1,000 birds

TREATMENT	AVE. 10 WEEK WT. (LBS.)	FEED GAIN
Basal	2.80	3.04
2.5% Distillers Dried Solubles (DDS)	3.03	2.89
2.5% Dried Whey (DW)	3.17	2.82
2.5% Condensed Fish Solubles (FS)	3.12	2.91
2.5% DW & 2.5% DDS	3.27	2.83
2.5% DW & 2.5% FS	3.26	2.87
2.5% DDS & 2.5% FS	3.26	2.83
2.5% DW & 2.5% FS & 2.5% DDS	3.39	2.76

Cost of basal ration figured at $5.00 cwt. Dried whey calculated on a corn replacement basis, fish solubles and distillers dried solubles on replacement of some corn and some soybean oil meal. Broiler price at 25¢ per pound.

Dried whey at 2.5% level improves feed conversion and profit over feed cost, with or without other unidentified factor carriers.

RESULTS USING 2.5% DRIED WHEY

TREATMENT	INCOME	FEED COST	INCOME OVER FEED COST
Basal	$700.00	$425.60	$274.40
2.5% DDS	757.50	438.94	318.56
2.5% DW	792.50	453.65	338.85
2.5% FS	780.00	457.13	322.87
2.5% DW & 2.5% DDS	817.50	470.80	346.70
2.5% DW & 2.5% FS	815.00	478.09	336.91
2.5% DDS & 2.5% FS	815.00	465.68	349.32
2.5% DW & 2.5% FS & 2.5% DDS	847.50	479.26	368.24

Per 1,000 birds

NOW! We're selling the "dried whey in broiler feeds story" for you in these broiler publications across the country: Broiler Growing, Eastern Breeder and Broiler Grower, Broiler World, Georgia Poultry Times and Broiler Journal.

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Dog Food Firm Reports on Findings

KANKAKEE, ILL. — Twenty per cent of America's dog-owning families now have two or more dogs, according to H. P. McGrath, general manager of the Gaines dog food division of General Foods Corp.

Of the nation's 17 million dog-owning families, 80% keep one dog, 14% have two dogs, 4% have three, and 2% have four or more, he states.

Mr. McGrath estimates that the total annual consumption of all types of food by America's dogs may be as much as 9 billion pounds. This figure includes the prepared dog foods manufactured in the U.S. as well as human foods specially purchased for dogs or served pets as table left-overs.

"No one knows for certain the dollar value of all this food," he says, "but the total so expended keeps dropping each year as the nation's dog-owners turn increasingly to prepared dog foods. Part of the trend is due to the use in the home of ready-trimmed meats and frozen foods in meal-size portions — resulting in a minimum of table left-overs — and part to the realization that no diet of left-overs can begin to compare in nutritional value with the good commercial dog foods specially prepared with the dog's food needs in mind."

The best of these prepared foods are so complete nutritionally, Mr. McGrath says, that the pet need receive no supplementary food, although table left-overs may be fed at levels up to 25% of the diet. Today's dogs are not only healthier but are living longer as well, he points out.

"The industry, embracing both dry and canned food, has had a satisfactory year in 1955 and looks forward to an equally good one in 1956," states Mr. McGrath.

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GRAIN FIRM INCORPORATES

COLUMBUS, KANSAS — Incorporation procedure has been completed by the Farmers Union, a grain elevator and warehouse firm.

Fred V. Jackson

REJOINS FIRM—Fred V. Jackson, after a one-year leave, has rejoined Hayes & Stolz Industrial Mfg. Co., Ft. Worth, Texas, and his appointment as sales and service engineer has been announced by Vernon Hayes, company president. Mr. Jackson began his career in feed mill and grain elevator engineering and sales with Hayes & Stolz in 1948, and is experienced in the planning and installation of mechanical equipment in either mills or elevators. Mr. Jackson will make his home in Ft. Worth where he will work out of the Hayes & Stolz home office.

Receipts and Shipments At Milwaukee Reported

MILWAUKEE, WIS. — December receipts of most grains at Milwaukee, as reported by the Milwaukee Grain Exchange, were under those of a year ago while shipments in that month increased. Here are the figures:

	Receipts (bushels)		Shipments (bushels)	
	Dec. 1955	Dec. 1954	Dec. 1955	Dec. 1954
Wheat	3,600	13,600	200,355	129,960
Corn	704,712	732,945	288,340	717,960
Oats	120,520	193,320	280,675	193,125
Barley	4,949,491	4,378,217	1,852,880	1,486,120
Rye	1,685	1,685	1,640	1,640

ELEVATOR COMPLETED

PLAINS, KANSAS—The new 500,000-bu. grain elevator owned by the Collingwood Grain Co. here, has been completed. Construction began last Aug. 15. Lloyd Dunlop, manager of the Plains unit, said work on the office building to serve the new elevator will begin in the spring.

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King Size Pack, Approx. 22 Lbs.

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The hog feeder is going to look long and hard at his production costs this year. If your hog feeds are Borden-fortified, he'll like what he sees!

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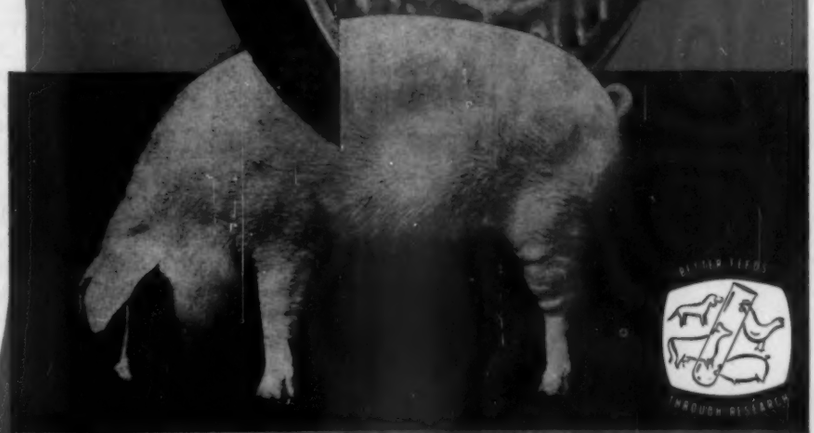

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REPORT TO THE FEED INDUSTRY

After a year with 'Stilbosol' here's the record...

Supplements fortified with 'Stilbosol' began moving into feedlots in volume about a year ago. Today, an estimated 65% of the nation's feedlot cattle are getting 'Stilbosol'-fortified rations. Here's a record of important events behind this rapid development.

NOV. 1954

On November 5, 1954, after a thorough review of painstaking research carried out at Iowa State College, Eli Lilly and Company receives permission to manufacture 'Stilbosol' (Diethylstilbestrol Premix, Lilly). Make first shipments of 'Stilbosol' to feed trade on November 29, 1954. More than 100 of nation's leading farm editors attend press conference on 'Stilbosol.'

DEC. 1954

Hundreds of supplementary new drug applications pour in from feed manufacturers to be processed and expedited. Lilly on round-the-clock production and shipping schedule to fill influx of orders. Lilly initiates free assay service to Lilly customers to help the feed industry quickly and safely market supplements fortified with 'Stilbosol.'

JAN. 1955

Heavy editorial attention is given to 'Stilbosol' and its use as a gain-boosting beef cattle feed ingredient. Interest high in feed trade and among cattle feeders. Eighteen additional research projects underway at agricultural experiment stations throughout United States to check benefits of 'Stilbosol' under wide variety of cattle feeding conditions.

FEB. 1955

Lilly Newsletter is inaugurated to help keep feed manufacturers and agricultural leaders abreast of latest developments. Feed manufacturers report increase in sales of cattle supplements due to feeder interest in 'Stilbosol.' Last few states move to O.K. use of diethylstilbestrol in feeds for market cattle.

MARCH 1955

Lilly expands free assay service facilities to complete assays of most customers' samples within 36 hours. Average supplemental new drug application now being processed in four weeks. Continuing research by meat industry confirms that no diethylstilbestrol is present in tissues of cattle fed recommended levels of 'Stilbosol.' Cattle feeders continue to be eager for information on use of 'Stilbosol.'

APR. 1955

An informed estimate indicates that about 38% of the cattle on feed in the United States are already on 'Stilbosol'-fortified rations. This is said to be the most rapid acceptance of a new practice in the history of American agriculture. Additional research at Iowa State in agreement that carcass quality, shipping shrink and dressing percent of steers appear not to be affected by use of diethylstilbestrol in the ration.

MAY 1955

The flow of feeding results from experiment stations, feed manufacturers and record-keeping cattle feeders begins to swell to a steady stream. Reports of extra gains and savings in feed cost often considerably above those achieved in pioneer experimental work. Announcement of new concentrations of 'Stilbosol' in feed supplements permitting use of 10 mg. of diethylstilbestrol in from one to four pounds of final supplement.

JUNE 1955

By June, over 700 manufacturers had applied for and received permission to make 'Stilbosol'-fortified supplements. Lilly announces payment of all transportation costs on orders of 200 pounds or more of the premix. Production of "The Beef Maker," 30-minute, full-color, sound movie on 'Stilbosol,' gets underway for fall use by feed manufacturers.

ELI LILLY AND COMPANY, AGRICULTURAL PRODUCTS

JULY 1955

New evidence of 'Stilbosol's' gain-boosting, cost-cutting benefits made public at experiment stations. Carcass comparison tests by colleges, feed manufacturers and meat packers lay to rest rumors of market discrimination. Research shows that mink reproduction appears not to be diminished by feeding of unwashed tripe from diethylstilbestrol-fed cattle.

AUG. 1955

Research results reported on bred gilts and sows following market cattle being fed diethylstilbestrol in their protein supplement. Work completed on 'Stilbosol' Fact Book. Illustrated and documented, this piece of literature summarizes known basic facts about oral feeding of diethylstilbestrol. Offered to cattle industry via feed manufacturers.

SEPT. 1955

USDA test-feeding confirms that diethylstilbestrol can increase rate of gain without adverse effect on meat quality. Heavy fall promotion of 'Stilbosol' gets underway in farm magazines and cattle feeder publications. Many fine feedlot reports available from record-keeping cattlemen. Lilly film, "The Beef Maker," completed and offered to feed trade for fall cattle feeder meetings.

OCT. 1955

Estimates indicate that more than 50% of cattle on feed get 'Stilbosol' in their protein supplements. Industry report shows sales of cattle supplements up 43% in first six months of 1955. Lilly releases complete summary of diethylstilbestrol cattle-feeding research reports to feed trade as a "Newsletter" service. Results of more than 60 tests included.

NOV. 1955

Summary of experiments confirms that 'Stilbosol' is helpful to gains *throughout* the entire feeding period. Estimates show that more than 5 million market cattle were 'Stilbosol'-fed during first nine months. Lilly customers continue to make heavy use of free assay service for their 'Stilbosol'-fortified supplements. 'Stilbosol' Fact Book goes into second printing.

DEC. 1955

Lilly continues to enlarge agricultural research facilities. Purchases 267 acres adjoining present 150-acre tract near Greenfield, Indiana. Work expanded on investigations in animal nutrition, veterinary medicine and plant pathology. Many feed manufacturers report as much as 80 to 90 percent of their cattle supplements now 'Stilbosol'-fortified.

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Minerals in Poultry Feeds

By Dr. Harry W. Titus

EDITOR'S NOTE: Information and comments on mineral requirements and allowances for poultry is provided in the accompanying article by Dr. Harry W. Titus of the Lime Crest Research Laboratory, Limestone Products Corp. of America, Newton, N.J. The article is an excerpt from a talk by Dr. Titus at the Kentucky Nutrition Conference.

v v

The mineral elements — at least, certain ones—are just as indispensable for the nourishment of animals as are the requisite vitamins, the essential amino acids and suitable sources of energy. Mineral elements are vital constituents of every organ, of every tissue, of every cell of all animals. Without them, there would be no life—either animal or vegetable.

We do not know all the mineral elements that are essential for animal life. We do know, however, that, for normal nutrition, poultry require calcium, magnesium, sodium and potassium; phosphorus, chlorine, sulphur, iodine and silicon; iron, copper, manganese, zinc and cobalt; and very probably fluorine. Many other mineral elements have been found in the eggs and tissues of chickens and other poultry, but it has not been demonstrated whether they are essential constituents or were present only because they were in the feed the poultry had eaten.

Obviously, no one of the required mineral elements is more important, as a nutrient, than any other, because an absolute deficiency of any essential nutrient is incompatible with life. It is true, however, that in the formulation of practical feeds for poultry some of the required mineral elements must be given special consideration; others may be supplied in trace quantities as a precaution against the possibility of a deficiency; and the remaining ones may be ignored because, in all likelihood, they normally are present in most natural feedstuffs in adequate or more than adequate quantities.

Those mineral elements that should receive special consideration are calcium and phosphorus; sodium and chlorine; manganese and iodine. Those that may be supplied in trace quantities as a precaution against the possibility of a deficiency are iron, copper and cobalt. Cobalt is included in this group because it has been shown that it can "pinch hit" for vitamin B_{12}.

Those that, in all likelihood, will be present in adequate or more than adequate quantities are potassium, magnesium, zinc, silicon and fluorine. Poultry's major requirement of sulphur must be supplied in the form of certain special organic compounds; the small quantity of inorganic sulphur that may be desirable is normally present in natural feedstuffs.

It should be noted, however, that in the formulation of so-called synthetic diets, that is, diets composed of highly purified nutrients, it is desirable to include all 15 of the elements I have named, including even silicon and fluorine.

Needed in Largest Amount

The mineral element required in largest quantity by poultry — and other livestock—is calcium. This is especially true of the laying chicken because the mineral matter of eggshells is about 98% calcium carbonate, and calcium carbonate is approximately 40% calcium. There are about 16 grams of calcium in each pound of 2-oz. eggs. And so, a chicken that lays 224 eggs—or about 28 lb. of eggs—per year uses about 448 grams of calcium in making eggshells.

The mineral element required in second largest quantity is phosphorus. In the growing animal the quantity of phosphorus that is required is dependent largely on the quantity of calcium that is consumed. This dependency results from the fact that calcium and phosphorus are the two major mineral constituents of the skeleton, and the additional fact that when more calcium is absorbed from the intestine than is used, it is excreted almost wholly in the form of calcium orthophosphate—either tricalcium phosphate or dicalcium phosphate, or both.

In addition to being an essential constituent of the skeleton, phosphorus has many other important functions in the animal organism.

Requirements and Allowances

Inasmuch as the mineral elements are not destroyed by oxidation nor by subjecting them to high temperatures, as are the vitamins, a suitable allowance of any one of them usually is not greatly different from the actual requirement. There are, however, some exceptions to this general statement. For example, phosphorus in the form of either phytin or metaphosphate is not used readily by the chicken.

In general, if an element is supplied in a form that is insoluble in the gastric juice, it is physiologically unavailable.

Usually, typical feed mixtures for poultry do not contain enough calcium and phosphorus unless special sources of these mineral elements are included in them. Accordingly, it is a common practice to include suitable quantities and sources of calcium carbonate and calcium phosphate in such mixtures.

When the calcium and phosphorus in a chick starter are derived from the usual sources, it is a good rule of thumb to adjust the calcium-phosphorus ratio so that it has a value of about 1.6 to 1. That is to say, when the total phosphorus content is, 0.6%, the total calcium content should be about 1.6 times as great, or about 1.0%. The ratio of available calcium to available phosphorus, however, should be about 2 to 1.

To estimate the available phosphorus, one may add to the nonphytin phosphorus about one-third of the phytin phosphorus. For example, in a corn-soybean diet containing about 3% of fish meal and 1% of dicalcium phosphate that contains 20% of phosphorus, there will

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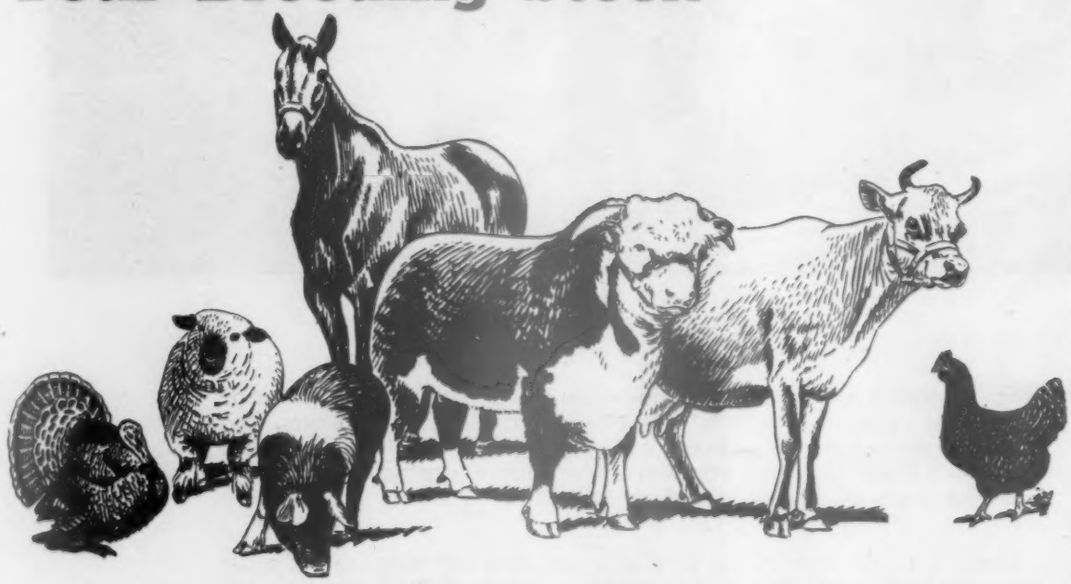

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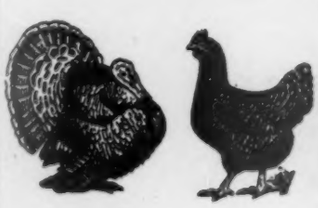

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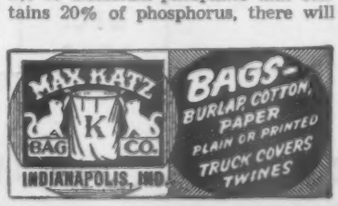

be about 0.4% of non-phytin phosphorus and about 0.26% of phytin phosphorus. Inasmuch as approximately one-third of the phytin phosphorus is physiologically available, there would be, in such a diet, nearly 0.48% of available phosphorus. Hence, the calcium content of such a diet should be about 1.0% since a small part of the calcium in the grains and seeds and their byproducts is not readily available.

The National Research Council now (1954) recommends that a starting feed for chickens contain at least 0.45% of inorganic phosphorus. On the basis of studies made at the Lime Crest Research Laboratory, I can say that if the calcium content of such a feed is suitably adjusted, it is not necessary that the content of inorganic phosphorus be as great as 0.45%. I have observed satisfactory growth and bone development on a diet that contained only 0.2% of added inorganic phosphorus and had a calcium-phosphorus ratio of 16 to 1. In this particular diet there was 0.294% of non-phytin phosphorus and 0.26% of phytin phosphorus, or about 0.38% of physiologically available phosphorus. The estimated ratio of available calcium to available phosphorus was approximately 2.25 to 1.

One thing that stands out in the studies, made at the Lime Crest Research Laboratory, of the calcium and phosphorus requirements of young growing chickens is this: The lower the level of phosphorus, the more critical is the level of calcium, and vice versa. As the level of phosphorus increases, the level of calcium becomes less critical. At comparatively high levels of total phosphorus intake — say, 0.8 to 1.0% — almost equally good results are obtained with a fairly wide range of calcium levels. There is, of course, an optimum level of available calcium for each level of available phosphorus, but there appears to be no one optimum calcium-

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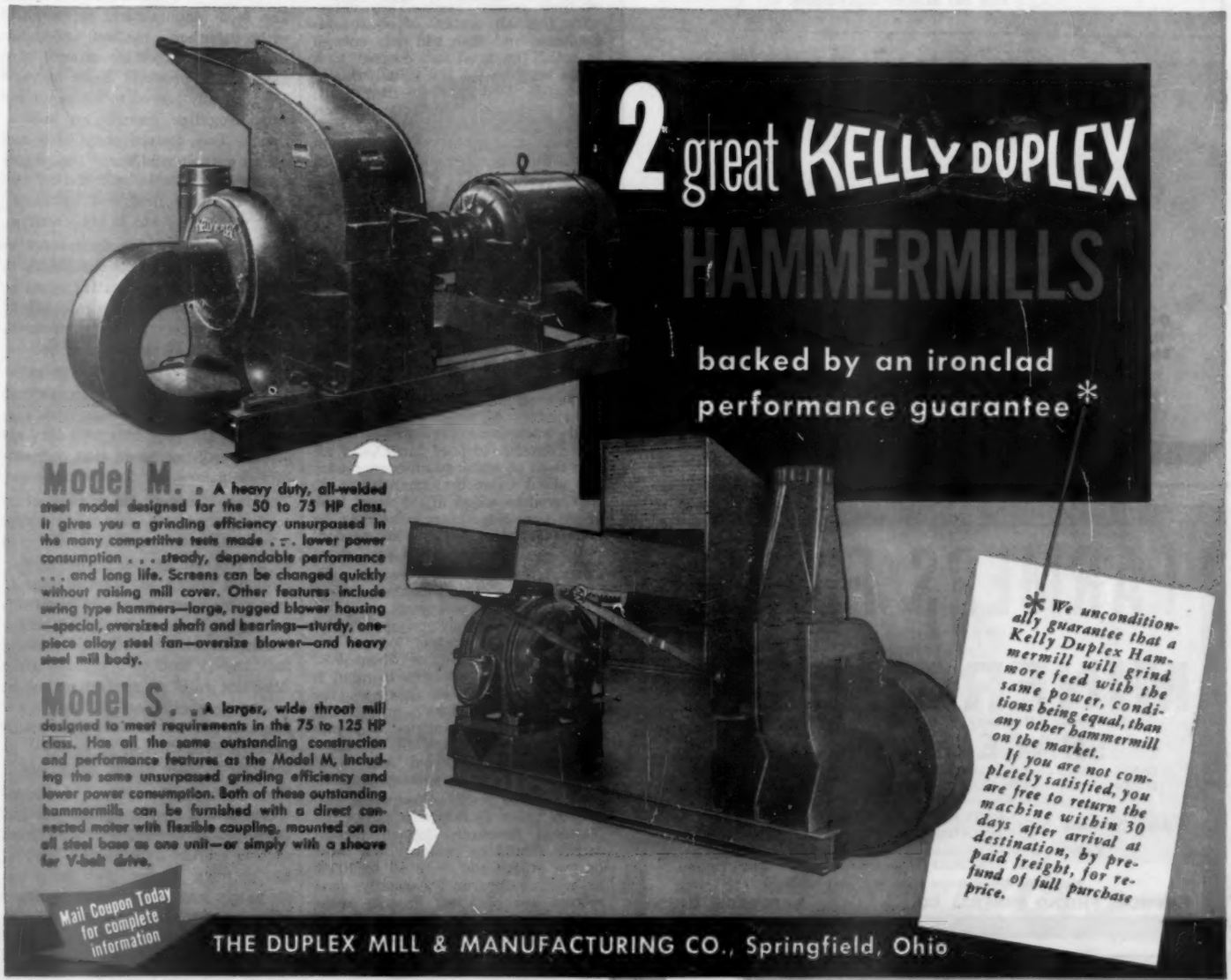
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phosphorus ratio for all levels of phosphorus.

About 17 or 18 years ago it was an almost universal practice to include 0.5% of salt in all-mash feeds, and 1.0% in mashes with which an approximately equal quantity of grain is to be fed. In recent years, however, commercial feed manufacturers have been including only about one half that much salt. The reason for this change is that an excess of salt—even a fairly small one—tends to increase the water content of the droppings.

Much of the evidence now available indicates that about 0.4 to 0.7% of total salt is fully adequate. That means that when allowance is made for the salt naturally present in the other ingredients of poultry feeds, it usually is necessary to add only about 0.25 to 0.5% of salt. In a few instances it is not necessary to add any salt.

Many feed manufacturers now carefully control the total salt content of their poultry feeds. They determine the salt content of all the ingredients and then add only enough to bring the total salt content to a value between 0.4 and 0.7% (usually about 0.5 or 0.6%), in the case of all-mash feeds, and to a value between 0.8 and 1.2% (usually about 1.0%), in the case of mashes with which an approximately equal quantity of grain is to be fed.

Manganese and Iodine

It is generally conceded that the feed of growing poultry, especially growing chickens, should contain about 50 to 55 p.p.m. of total manganese, and that the feed of laying poultry should contain about 35 p.p.m. That means that usually it is necessary to add 10 to 30 p.p.m. of manganese to modern all-mash feeds, and about twice as much to mashes with which grain is to be fed. Usually, one-quarter of a pound of feeding grade manganese sulphate — which now contains 70% of $MnSO_4$—is all that need be added to all-mash feeds; and about twice that quantity is all that need be added to the usual type of mashes. More manganese may be added, if desired, but it is not needed.

According to the National Research Council, the total feed of young growing chickens should contain about 0.5 mg. of iodine per pound, or about 1.1 p.p.m. Older chickens, apparently, require somewhat less iodine, say 0.35 mg. per pound, or about 0.77 p.p.m. The point to keep in mind is that nearly all feed mixtures for poultry tend to contain appreciably less than these quantities of iodine unless a special source of this mineral element is included. And so, it is desirable to add a special source.

A few feed manufacturers add two to five times as much iodine as the National Research Council recommends should be present; and most of the others add from 50 to 100% as much. Apparently, equally good results are obtained because most mixed feeds, before any iodine is added, contain up to 50% of the quantity recommended by the National Research Council.

There is a rather widespread belief that all marine products, including fish meal, are good sources of iodine. This belief, of course, is not true. It has been my observation that fish meals rarely contain more than 2.5 p.p.m. of iodine, whereas, many lots of meat scrap contain as much as 4 p.p.m. Even if fish meal and fish solubles contained as much as 5 p.p.m. of iodine, the quantity of these products used in today's mixed feeds would rarely add more than 0.3 p.p.m. It may be pointed out also that iodized salt cannot be depended on to supply the additional iodine that is desired. Iodized salt, when manufactured, is supposed to contain not less than 70 p.p.m. of iodine, but by the time it is used it frequently contains less than 50 p.p.m. In any case, when the usual iodized salt is used at a level of 0.25%, the most

Advertisement

FEED For THOUGHT

Not by Bread Alone

Skepticism is prerequisite to success in business as in research. Confidence is equally essential. Sometimes the former predominates now to the detriment of the latter. Good selling establishes confidence; overselling encourages skepticism and confusion.

The feed manufacturer is swamped with salesmen, mailers, and ads shouting the favorable aspects of a multitude of products. Sales mediums are generally geared to stress virtues only. Negative aspects go unmentioned. This fosters skepticism and weakens confidence. The buyer yearns for reliable information and often conducts field and laboratory tests which may add to his confusion.

The buyer has a "discount rate" to apply in estimating the credibility to place on selling claims. He tends to apply high "rates" indiscriminately to all selling attempts. To compensate for this, sales techniques may become even more positive in approach.

Have we all become so accustomed to this that we now look with suspicion on the poor cuss who says his product will not do all that competitors claim or infer for theirs?

The manufacturer of a product is confronted with the fact that nothing is perfect. Questions arise in his mind as to how far he can go in his promotional claims yet remain fair to customers, his conscience, and his company. How much should be revealed about limitations, knowing that buyers tend to apply the same "discount rate" to modest claims as to exaggerated ones? Will such admissions put his product at a disadvantage even though it is equal or superior to more highly touted ones?

The approach of one firm to the introduction of a new product it has developed is noteworthy. Data from several sources indicate this product has promise. Rather than jump immediately into sales, it is proposed to offer it for trial to feed manufacturers with adequate research personnel and facilities for critical controlled tests. The pooled results would then be available for complete presentation to the trade, if the product proves to be of merit. Would you accept such results?

It seems to me that pressure selling is passé, that selling must be founded on mutual confidence—faith—engendered by sound and impartial facts, circumscribing clearly areas of usefulness and delineating areas of doubtful application.

Dr. H. S. Wilgus

PETER HAND FOUNDATION
1000 W. North Ave. Chicago 22, Ill.

iodine it can add to a feed is only 0.175 p.p.m., and often it adds only about 0.125 p.p.m.

Some feed manufacturers add iron, copper, and cobalt to their poultry feeds, and some do not. Personally, if I were choosing between two feeds equal in price and apparently equal in quality, and if one contained small added quantities of these three elements and the other did not, I would select the former. However, when a feed manufacturer adds iron, copper, and cobalt to his poultry feeds, he should be careful not to add too much. If the added iron is in the form of the red oxide, it makes but little difference if a comparatively large quantity is added, because virtually none of the iron in that form is available.

When iron, copper, and cobalt are to be added to poultry feeds, there is, then, the question of how much should be added. That question is not easy to answer. In any case, there is no point in adding more than the requirement. That means that of copper is not more than 2 p.p.m.; and that of cobalt is not more than 0.2 p.p.m. And, in the case of cobalt, the maximum quantity to add may be —and probably is—as little as 0.1 p.p.m.

Now and then one finds a feed manufacturer who, in an effort to do a thorough job of adding the trace mineral elements to his poultry feeds, includes small quantities of zinc and boron, and possibly other mineral elements. There is no evidence that the adding of zinc and boron to poultry feeds is worthwhile.

Hybrid Lambs Offer Prospect of More Efficient Production

WASHINGTON — Hybrid lambs—some of which have been developed at the agricultural research center at Beltsville, Md.—promise ranchers increased efficiency in the production of meat and wool, the U.S. Department of Agriculture reports.

Representing two- and three-way crosses of different high-quality purebreds, the Beltsville hybrids have far outclassed their parent stock in production and in reduced mortality.

These lambs are crosses of purebred Hampshires, Shropshires, Southdowns and Merinos of strains that have been improved at Beltsville through several years of selective mating and line breeding. The department points out, however, that commercial growers can produce vigorous hybrid lambs by crossing their own grade flocks with high-quality purebreds of another breed.

Results of the Beltsville tests, showing material improvement in the production and mortality rate of the hybrids compared with purebred lambs from the same foundation strains, cover two-way crossbreds observed over a seven-year period and three-way crosses tested for four years. Bases of comparison were (1) the mortality rate of lambs and (2) the "production index" of each ewe, indicating her producing ability in terms of weaned weight of lambs and weight of yearling fleeces.

The average production index of three-way cross lambings was 74.4, compared with 62.0 for the purebred flocks used in this cross. This amounts to an average increase of 20.6% in the total production of the crossbreds as compared with the purebreds. The three-way-cross lambs showed 38% lower mortality than the purebred lambs in these tests.

During seven years of testing the two-way-cross lambs, the ewes showed an average production index of 67.8 when bred to rams of their own breed, compared with an index of 58.1 for similar purebred ewes bred to rams of their own breed. This is an increase of 16.7% in the total production of the two-breed crosses as compared with production of the purebreds. Lamb mortality was 31.4% lower in the crossbreds of this group.

Brothers Operate String Of Feed Mills and Stores

By Al. P. Nelson

When a farm supply firm can offer the farmer practically a one-stop service for many of his needs, then combine this with competent, friendly service and feed advice, it has a merchandising program which will usually produce profitable results.

This program has produced results for the F. M. Brown's Sons of Pennsylvania, who operate a string of feed mills and stores at Shillington, Reading, Sinking Spring, Fleetwood, Birdsboro and Stonersville. The firm is over 90 years old, and in the firm at present are four Brown brothers—Emmett, Clay, Norris and George.

At each of the firm's mills, the feed concern operates grinding, mixing and other equipment. It makes its own dairy, poultry and hog feeds. And by having custom grinding and mixing at each location, the firm has an additional drawing card for farmers who raise some of their own grains.

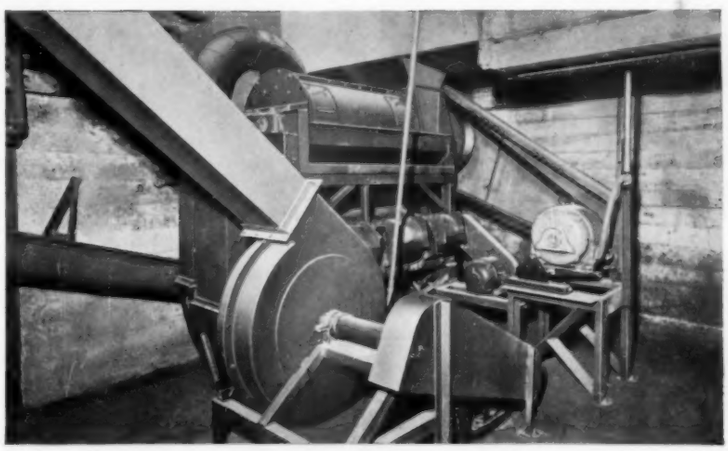
The organization also makes Rosewood white flour at Fleetwood, selling it throughout the trade area. The Brown organization covers about a 60-mile radius with its various mills, and the flour made at Rosewood is sold through various outlets. Quite a few of the flour customers are farm-

(Continued on page 49)

Eliminate Your CORN SHELLING BOTTLENECKS with TRIUMPH No. 1200* CORN SHELLER CLEANING ATTACHMENT AND COB BLOWER

*Patent Applied For

View at right shows one of the two simple, proven Triumph No. 1200 Corn Shelling systems at the world famous Anderson Truck Terminal, Maumee, Ohio. These compact systems shell the corn; remove and blow away husks, silk and small trash particles with the cobs; discharge up to 1200 bushels of air cleaned shelled corn per hour. Six more Triumph No. 1200 Corn Shellers are being installed by Anderson during 1955.



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Clinton County Farm Bureau..Wilmington, Ohio

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There's no surer way to help prevent disease and keep your chicks healthy than the use of the *right* amount of the *right* antibiotic. Not just *any* antibiotic, but the world's greatest disease-fighter: AUREOMYCIN Chlortetracycline.

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One of the string of feed mills operated by F. M. Brown's Sons is this one at Shillington, Pa. Other mills and stores are located at Reading, Sinking Spring, Fleetwood, Birdsboro and Stonersville. In addition to complete feed mixing and grinding service, the 90-year-old company also makes and sells flour in the area.

ers who buy feeds at the Brown mills and who also sell grain to them at certain times of the year.

Considerable manpower is used in operating these mills. For example, the Brown organization has three full time salesmen who constantly visit farmers in the entire trade area, discussing farmers' feed, fertilizer and other needs with them. At Shillington, nine men are employed; at Sinking Spring, 14; at Reading, seven; at Birdsboro, 14, and at Stonersville, five.

Route System Used

The Brown mills also use the route system which they have found a lucrative method of contacting many farmers regularly and getting more business. An idea of the extensive coverage on routes offered by the firm is the route schedule out of Shillington: Mondays, three routes; Tuesdays, four routes; Wednesdays, four routes; Thursdays, three routes; Fridays, three routes; Saturday mornings, two routes.

The Shillington operation alone uses five trucks for covering routes and other work connected with the mill. Many hundreds of farmers are served regularly on this route system at the various Brown mills.

When the three salesmen are out regularly on their calls, they may cover the territory of two mills, taking orders and then routing delivery out of the nearest mill and store.

For the farmer who does not want to buy a complete feed, or who has his own grain to be mixed with concentrate, the Brown organization will haul the grain into the mill, grind and mix it and bring the feed back to the farmer.

All told, the Brown organization has 35 pieces of motorized equipment which is used in the delivery of feed, coal and other products.

Each Brown mill has a very efficient bookkeeping system. Inventory at each mill is taken twice a year, an effort which aids greatly in stock control and centers the spotlight on slow moving merchandise. Each mill currently has on its books about two weeks business, and every effort is made to sell for cash, while credit accounts are watched very carefully so they do not become delinquent.

To encourage customers to come and call for some feeds, especially small lots, a discount of 5¢ a bag is given on feed purchased in this manner.

With so many feed mills operating in one area, the exhibit of feeds and related products at an outstanding county fair in the area is good business. The Brown organization usually has an extensive exhibit each year at a fair in Oley, Pa., which draws a large rural attendance. At these exhibits many booklets on feeding are given to farm people. The salesmen in charge of the booth also have the opportunity to contact many new farmers.

The newspaper advertising which the firm does carries the location of each of the Brown mills and stores. Some radio advertising is done seasonally on stations WRAW and WEEU, Reading, Pa., and in these instances the various mills are also mentioned by location. This gives listening farmers an idea of the many ways in which Brown mills can serve them regionally.

Experimental Farm

With as large an organization as this, the use of an experimental farm is a good business promotion. The Brown organization has a 500-acre farm on which are raised about 150 steers. The farm also has a herd of 35 dairy cattle, besides a poultry flock. In addition some corn, wheat and oats are raised.

Operation of this farm gives the Brown brothers a first hand knowledge of farm problems, including feeding, and this experience helps a great deal in serving farmers throughout the trade territory.

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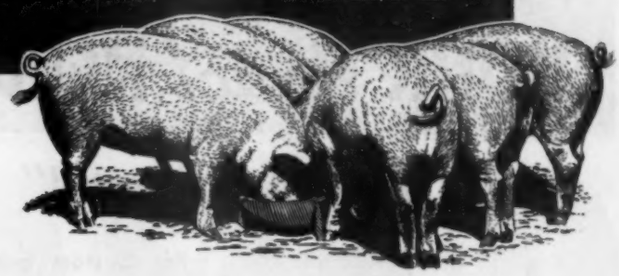

As a feed dealer, you're in business to make a profit. So it stands to reason that you'll want to sell Sargent MINRAL MEAL, the supplement preferred by successful hog raisers. Sargent MINRAL MEAL—just one of a complete line of Sargent feeds—is a protein and mineral balancer that keeps your customers coming back. Write today for details of our attractive dealer set-up.

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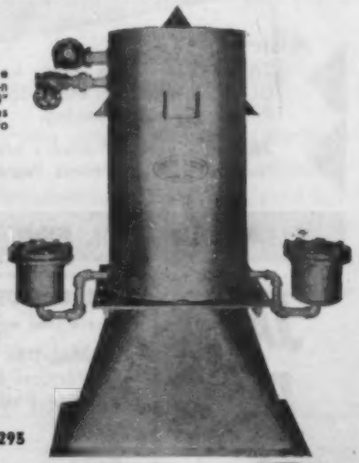

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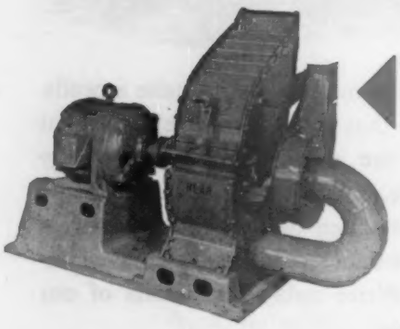

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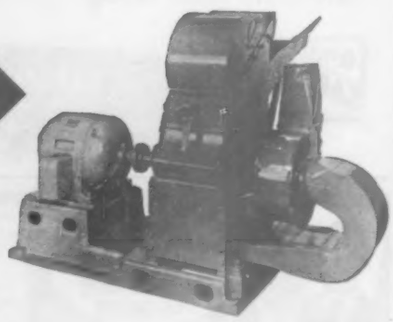

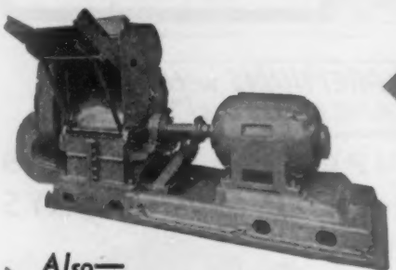

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Harold C. Banks

Nominees for Posts in Merchants' Exchange Of St. Louis Named

ST. LOUIS — Harold C. Banks, president of the American Grain Co., has been nominated for the presidency of the Merchants' Exchange of St. Louis, it has been announced by R. A. Woolsey, Jr., chairman of the nominating committee. Mr. Banks is currently vice president of the exchange. Incumbent president is Edward S. Deibel of the Elam Grain Co. The election is scheduled for Jan. 18.

Nominations for other official posts were announced as follows: Benjamin M. Schulein, president of Neumond, Inc., for first vice president; C. Robert Pommer, vice president of Corneli Seed Co., for second vice president; J. F. Imbs of Imbs Milling Co., J. W. Hogan of Ralston Purina Co., and R. D. Hunt of Illinois Grain Corp., for directors.

The nominee for president began his career in the grain business in 1919 with Hall-Baker Grain Co. and stayed with that firm until 1930.

From 1930 until 1933 he was associated with Farmers National Grain Corp. and Grain Stabilization Corp. in Chicago. In 1934 he joined the newly formed Terminal Grain Co. as secretary. He was stationed at Bloomington, Ill., until 1941 when he moved to its Peoria, Ill., office where he continued until 1951. He served as president of the Peoria Board of Trade in the latter year. He then came to St. Louis to assume the presidency of Terminal Grain Co.

WORTH CROWING ABOUT!

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Feed Divisions of Peavey Hold Meeting

MINNEAPOLIS—Sales and management representatives from six states attended a two-day sales meeting of the Occident and Tone feed divisions of F. H. Peavey & Co. in Minneapolis, under the direction of J. R. Lindell, sales manager.

Sales and promotion plans for the first half of 1956 were outlined. Major emphasis was placed on programs of unified feeding.

On the program were F. T. Heffelfinger II, general manager; J. R. Adams, advertising manager; Myron Carpenter, director of products control and nutrition; John Pierson, merchandising manager, and Homer Munson, farm service manager.

Feed Firms Receive Small Business Loans

WASHINGTON — Four feed firms and one feeding operation were included in a recent listing of loan approvals announced by the Small Business Administration.

The firms and the amounts of the loans approved were: Prairie Milling Co., Montgomery City, Mo., $50,000; W. B. Coger Warehouse, Inc., Little Rock, Ark., $75,000; Crowley (Texas) Feed Mill, $23,500; Athens (Ga.) Milling Co., $100,000, and the Patterson Sheep Co., Missoula, Mont., $27,500.

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Interest in Customers Builds Business for Dealer

By Al. P. Nelson

The tall, tanned, quiet appearing farmer came into the Millersville Supply Co., Inc., Millersville, Pa., and stood silently while Amos H. Charles, manager, waited on another farmer. Finally, when Mr. Charles waited on the tall, quiet farmer, he said pleasantly, "Hello, George. Did you sell your steers yet?"

The face of the quiet farmer broke into a slow, pleased smile. "Yes, I sold them last week. Got 24¢. Fair price for these times, I guess."

One could tell from watching that farmer and listening to him talk that he appreciated the fact that Mr. Charles remembered that he was raising beef cattle, and that it was about time to sell them. He bought quite a few items on that trip, and when he said good-by to Mr. Charles before he drove away in his truck, his manner was warm and friendly.

Mr. Charles says that he tries to learn what every customer is doing, and to keep track of how his herds, his poultry and his crop are progressing. In this way he makes appreciative friends and customers out of farmers. And it is good for his business.

"Most customers like to talk a little about what they are doing on the farm," says Mr. Charles, "and when I ask them questions about their activities, it gives them a chance to loosen up. I guess most of them like it, too."

Besides recognizing the farmer for what he is and what he does, Mr. Charles is also alert to what the farmer needs in the way of feed, fertilizer, seeds, farm hardware, farm chemicals, sprayers and other equipment.

"We grind and mix here, besides selling formula feeds," Mr. Charles reports, "and we carry all these other lines to help us get additional volume. In these competitive days, a dealer needs to get some extra sales, and lines such as farm hardware, fertilizers, insecticides, sprayers, etc., will do it. At least we find it so."

Farmers Gather in Store

The Millersville store has four islands which carry a lot of merchandise well displayed. In addition there are some fine wall displays of merchandise, all of which are seen by the many farmers who gather in the store. This reporter couldn't help but be impressed with the way farmers liked to hang around and talk about the weather, their crops and herds and feeds, as they made purchases or paid bills. Mr. Charles and his assistants were cheerful and friendly in waiting on customers.

"We could almost publish a farm newspaper with the information that comes out in this store," says Mr. Charles, "and a lot of that information we can use in dealing with our customers. By talking in our store a farmer often gives us the clue to what type of farming he is especially interested in. We remember things like that and follow up on them."

While Mr. Charles would like to have more time to get out into his trade area and visit with farmers, he does spend several days a month at it. He also benefits from the resale work and farm visits which Ray W. Hiestand, his helpful formula feed salesman in the district, makes periodically, talking feed problems with many farmers.

"I go along with Ray whenever I have the chance," says Mr. Charles, "but if I am too busy then Ray

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Use Feedstuffs WANT ADS for RESULTS

Talking over mutual problems concerning sales of feed from the Millersville (Pa.) Supply Co., Inc., are Amos H. Charles (left), manager, and Ray W. Hiestand, salesman in the area for Wayne feeds.

doesn't mind going out alone. I believe in cooperating with feed salesmen. They can really help a dealer a lot."

Most of the feed sold in this area is dairy and steer feed, reports Mr. Charles, although some poultry and hog feed is used. The average milking herd may range up to 35 cows, of which 25 may be milking steadily throughout the year. Some of the farmers are of Pennsylvania Dutch extraction, and they are neat, methodical, thorough farmers, who take good care of their dairy cattle, feed them well and consequently reap good profits.

"We do not have an outside salesman at this time, but we are considering hiring one," states this dealer. "Today's market really demands a full time outside man who can call on and service farmers in more ways than one. Such a man can also help to handle the collection problem."

The feed mill is also the agent for a fertilizer spreading service in the area. Farmers who want such a service, notify the feed firm and they contact the spreader. Tying in such a service with the sale of fertilizers enables the company to see that farmers' needs are handled without visiting too many firms.

The firm advertises on a limited scale, using some newspaper space and also occasional direct mail. "We try to make a good customer relations program advertise our business," says Mr. Charles. "We never forget that it is the customer who keeps this business making a profit, and we try to serve him so well that he wants to come back."

Paul A. Vogel Joins Shea Chemical Co.

NEW YORK—Appointment of Paul A. Vogel as director of commercial research of the Shea Chemical Corp. was announced Jan. 3 by Vincent H. Shea, president. Mr. Vogel will be located at the New York office of the company.

He joins the Shea firm after undertaking similar duties with Allied Chemical and Dye Corp. in New York. Since 1950, Mr. Vogel directed market research activities for the General Chemical Division of that firm and more recently also acted as market research director for the National Aniline Division. Prior to 1950, Mr. Vogel's experiences included managing market research functions for the Emhart Manufacturing Co., Hartford, Conn., and sales analysis functions for the Du Pont Co., Wilmington.

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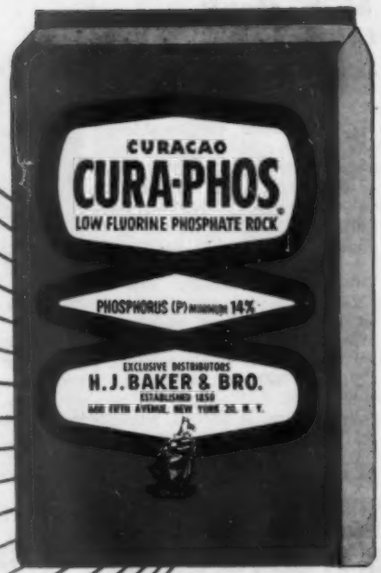

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New Products
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This reader service department announces the development of new and improved products, new services and new literature offered by manufacturers and suppliers. Claims made in this department are those of the firm concerned. Use the accompanying coupon to obtain the desired information.

No. 5376—Draft Curtain

The Bemis Bro. Bag Co. has complete information available on its retractable curtain, called TransWall, for plants, warehouses, etc., to shield doorways during cold weather. The curtain slides readily out of the way for free use of floor space, the manufacturer states. Other features claimed are: It is built of a heavily coated fabric and installs easily on a single overhead track. Nylon rollers permit instant retractability. Little space is used when retracted. For example, a curtain 20 feet wide retracts to only 2 ft. TransWall is available in custom sizes to suit individual needs. Complete information may be obtained by checking No. 5376 on the coupon and mailing it to this publication.

No. 6353—Rotary Tillers

The Midland Co., builder of garden tractors, announces that retail feed and fertilizer dealers are eligible for dealerships on its line of rotary tillers and garden tractors. Coincident with this announcement is the introduction of a new Midland rotary tiller. The tiller takes a 16-in. tillage swath, has special tines of rugged, forged steel of the slicing, non-heeling type, designed to stay remarkably clean, minimizing wrapping and winding, the company states. It is powered by a Briggs & Stratton 2¾ h.p. air-cooled engine, equipped with recoil

starter and quiet muffler. The unit is said to be exceptionally well-balanced, providing ease of operation and tilling efficiency usually found only in much more expensive equipment. Controls are within easy reach of the operator. For further information about the equipment and dealerships, circle No. 6353 on the coupon and drop it in the mail.

No. 5377—Bale Fork

The Olson Manufacturing Co. is manufacturing a bale fork which is claimed to easily handle eight to 10 bales without stacking. The bale fork is hooked into the bales on the rack and lifted into the mow in a flat manner. Bales are dropped in the same position as they were picked up. The frame is constructed of high carbon steel tubing and the company announcement states that the unit will provide years of satisfactory service.

Any fork pulley will hook it into the unit's clevis, it is said. The unit comes shipped, ready for immediate use by the buyer. Total weight is 32 lb. Dealers may secure more information by checking No. 5377 on the coupon and dropping it in the mail.

No. 5378—Vibrating Feeder

The Richardson Scale Co. announces a new four-page bulletin describing its Velofeeder, a new mechanical vibrating feeder. The feeder is designed to facilitate a steady flow of any loose bulk material such as soybeans into such processing machinery as automatic scales, grinding mills, pulverizers, mixers, conveyors, elevators and packaging machinery. The bulletin outlines the operating principles and specifications of the feeder. Nine photographs show the device actually feeding a variety of materials, and a full-page engineering drawing details its design. Secure more complete details by checking No. 5378 on the coupon and mail it to this publication.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 5329—Folder on portable formula feed blender, Barnard & Leas Manufacturing Co.

No. 5330—Plastic base material to coat boxcars, J. W. Mortell Co.

No. 5331—Hanging feeder for poultry and turkeys, Rhinehart Manufacturing Co.

No. 5332—Chart on protein balancing with methionine in broiler rations, Specifide, Inc.

No. 5334—Corn sheller, Bryant Engineering Co.

No. 5333—Feedstuffs energy values booklet, Limestone Products Corporation of America.

No. 5335—Premix for cattle fattener feeds, Poul-An Laboratories, Inc.

No. 5336—Packaging and application of poultry medicinals, Vineland Poultry Laboratories.

No. 5337 — Bulk-bag feed body, Baughman Manufacturing Co.

No. 5338 — Poultry feeder units, Brower Manufacturing Co.

No. 5339 — Molasses mixer, Fort Worth Steel & Machinery Co.

No. 5340—Mastitis treatment, Dr. LeGear Medicine Co.

No. 5341—Seed treater, Panogen, Inc.

No. 5342—Stationary feed manufacturing units, Daffin Manufacturing Co.

No. 5343—Livestock minerals booklet, Barton Salt Co.

No. 5344—Bulletin for processing operations, Fuller Co., subsidiary of Hershey Machine & Foundry Co.

No. 5345—Rotary Airlock feeder, Prater Pulverizer Co.

No. 5346 — Straddle carrier, Ross Carrier Division of Clark Equipment Co.

No. 5347 — Flock record chart, American Scientific Laboratories.

No. 5348—List of special days—50¢ a copy, order from Domestic Distribution Dept., Chamber of Commerce of the U.S., 1615 H St., N.W., Washington 6, D.C.

No. 5349—Feeder for starting pigs, Farmer Feeder Co.

No. 5350—Hopper magnet, H. C. Davis Mill Machinery Co.

No. 5351 — Hog wormer, Pemco Products, Inc.

No. 5352 — Egg grader, National Poultry Equipment Co.

No. 5353—Fire alarm system, Seedburo Equipment Co.

No. 5354—Booklet on animal fat handling and mixing systems, Wenger Mixer Manufacturing Co.

No. 5355—Bulletin on "Biological Test Diets," General Biologicals, Inc.

No. 5356—Automatic oil brooder, Makomb Steel Products Division, Globe American Corp.

No. 5357—Hammer mill, Prater Pulverizer Co.

No. 5358—Liquid and dry feeders, Omega Machine Co., Division of B-I-F Industries, Inc.

No. 5359—Drag conveyor, Southern Equipment Co.

No. 5360 — Continuous feeding of dry materials, Omega Machine Co., Division of B-I-F Industries, Inc.

No. 5361—Bulk weighing scale bulletin, Richardson Scale Co.

No. 5362 — Hanging feeders, National Ideal Co.

No. 5363—Rumen stimulator, Cudahy Packing Co.

No. 5364—1956 calendar featuring weather information, John W. Eshelman & Sons.

No. 5365—Grain sampler, Ralph C. Gardner & Co.

No. 5366—Cattle and sheep wormer, Anchor Serum Co.

No. 5367—Dust filter unit, Day Co.

No. 5368 — High speed pulverizer bulletin, Pulva Corp.

No. 5369 — 150-bu.-per-hour liquid seed treater, Panogen, Inc.

No. 5370 — Poultry mash antioxidant, McKesson & Robbins, Inc.

No. 5371—Automatic open mouth bag filling machine, Kraft Bag Corp.

No. 5372—1,000-lb. capacity lifter, Colson Corp.

No. 5373 — 150-bu.-per-hour liquid seed treater, Panogen, Inc.

No. 5374 — Dust collectors, Omega Machine Co., Division of B-I-F Industries, Inc.

No. 5375 — Alfalfa bale shredder, Winsted Roto-Matic.

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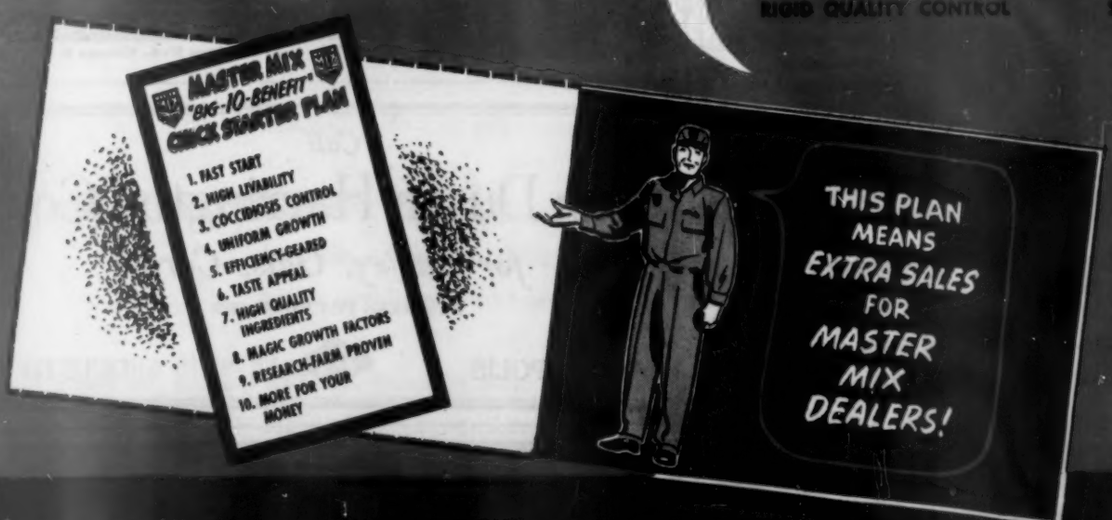

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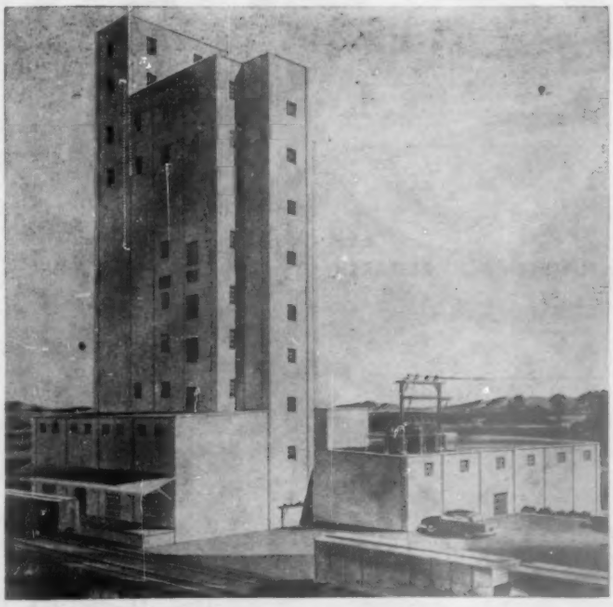

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New Hampshire Reports on Poultry Study

DURHAM, N.H. — University of New Hampshire researchers recently reported on the results of an experiment dealing with the protein-energy ratio of feeds and the use of finishing rations for broiler production.

Richard Vondell of the poultry department explained that one group of New Hampshire chickens was fed a ration containing 21% protein to 10 weeks. With another group, this was reduced to 19% at seven weeks of age, and another group, fed the same starting ration, was reduced to 16% protein.

Results, which are tabulated in the accompanying table, indicate that reduction of protein from 21 to 19% at seven weeks of age produced broilers which were comparable to those raised on a 21% protein ration for 10 weeks. Reduction of protein to 16% at seven weeks resulted in broilers which did not compare to those on either 21 or 19% protein rations.

Mr. Vondell said: "Looking at these results from the protein-energy viewpoint, we may explain these findings thusly: At seven weeks of age the need for protein is decreased and consumption, which is determined by the chicken's need for energy at this age, is such that sufficient protein is taken in to meet growth requirements during the 7-10 week period at the 19% protein level. At the 16% protein level, however, protein intake is not sufficient because the chicken's appetite is satisfied before adequate protein is consumed.

"The C-P values (calorie-protein or number of calories of energy to every 1% protein in feed) of the rations used in this trial were: Group 1, 41.77; Group 2, 48.09; Group 3, 56.72.

"A C-P ratio, which is an approximate guide for balancing energy and protein of a ration, above 48 apparently results in poor growth. These findings are in agreement with figures presented by Maryland researchers who state that a C-P ratio over 48 results in impaired growth and poor feathering."

New Hampshire Poultry Experiment

		0 to 7 Weeks		7 to 10 Weeks		0 to 10 Weeks	
	% Protein	Weight	Lb. feed per lb. gain	Weight gain	Lb. feed per lb. gain	Weight	Lb. feed per lb. gain
Group 1*	21%	2.20	2.34	1.32	3.62	3.53	2.53
Group 2*	21–19%	2.21	2.32	1.29	3.86	3.50	2.86
Group 3*	21–16%	2.21	2.32	1.10	4.37	3.31	3.04

*Average of three replicates.

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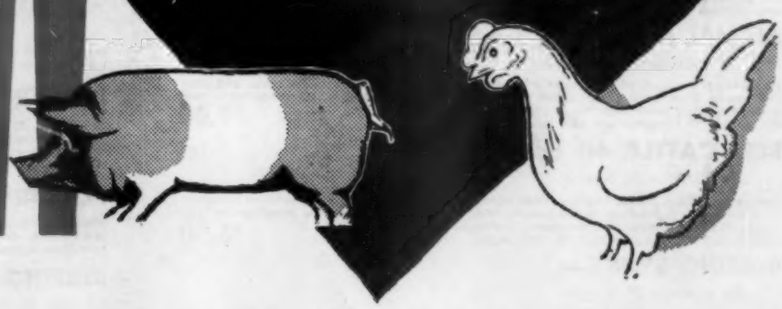

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FEEDING AND MANAGEMENT SYSTEMS

(Continued from page 30)

essential that the effect of several other factors be kept in mind as they are intimately associated with some of the feeding practices used in the field today.

Breeders of egg production strains have worked towards reasonably early sexual maturity ever since the pioneer work of the Maine and Massachusetts Experiment Stations showed that this character was associated with high annual egg production. During recent years, producers of broiler strains have bred intensively for rapid early growth because of its highly desirable influence on the time factor and feed efficiency achieved in broiler production.

Unfortunately, early sexual maturity is closely associated with rapid early growth and, as one has been achieved, the other has come along with it. Many of the extreme feeding practices in use in the field today have been designed primarily to counteract this tendency towards early sexual maturity.

The season of hatch and the associated factor, amount of light, to which pullets are exposed during the maturing period have a definite effect on sexual maturity and egg size as shown by the Delaware data presented in Table 2. Few problems with early sexual maturity or egg size are encountered with birds hatched from March through September. Birds hatched from October through February tend to mature earlier and have a smaller initial egg size. Controlled lighting systems and restricted feeding techniques have been explored with varying degrees of success in an effort to counteract these tendencies.

Although disease and general management practices are major factors affecting the development of a replacement pullet, space prevents a detailed discussion of them here.

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ana, Wisconsin and at the research farms of several commercial organizations, including General Mills, the Hy-Line Poultry Farms, the Ralston Purina Co. and the Chas. M. Cox Co.

Our particular interest has been the effect of (1) feeding a nutritionally complete versus a deficient ration to pullets during the growing season, (2) the effect of total nutrient intake, and (3) the influence of protein and mineral levels on the development of the pullet. Nutrient intake can be controlled by feed formulation but, in many instances, it is modified by the poultry farmer by some system of feed restriction.

Although full feeding of pullets is probably practiced more widely than any other system, there are many who feel that some type of feed restriction is advantageous.

General Trends

The results obtained at the various research centers are by no means uniform, but the general trends may be summarized as follows:

(1) Restricting the total nutrient intake to an amoupnt less than the minimum required by the bird for normal growth will delay sexual maturity from a few days to several weeks depending upon the severity of the restriction.

(2) The body weight of pullets reared on a restricted feed system will be less at housing time than that of birds full fed.

(3) Mortality during the growing period is not influenced by feeding system unless the feed restriction is severe to the point of semi-starvation.

(4) A nutritional deficiency may delay sexual maturity (Table 3) and, in some instances, may have an adverse effect on subsequent laying house performance.

(5) If feed restriction is to be practiced, the objectives can be accomplished equally well by (a) restricting the total weight of a high efficiency type of ration, (b) controlling the amount of time that birds have access to a feed of either high or low efficiency type, or (c) by feeding a bulky diet such that they cannot consume their total nutrient needs (Tables 4 and 5). Within the limits of my experience, system number one has produced the most uniform pullets.

(6) In approximately half the studies, restricting the feed intake increased the cost of producing a pullet to sexual maturity. In our Connecticut studies (Table 4), lot 2 fed a restricted amount of a high efficiency ration was the cheapest to produce and performed as well as or slightly better than the other lots.

(7) Although it is not uniformly true, the majority of the experiments indicates that pullets raised on a restricted feed system live slightly better in the laying house than those raised on a full feed system (Tables 4 and 6).

(8) Egg production as calculated on a hen-day basis is not influenced by feeding system during the growing period. On a hens housed or total egg basis, however, birds raised on a restricted feed system showed a slight advantage as a result of their slightly greater livability.

(9) There is a slight shift in the distribution of egg production. Full fed pullets tend to lay more eggs during the first 12 weeks of production and fewer at the end of the laying year, in contrast to restricted fed birds, which lay fewer eggs at the beginning and more eggs towards the end of the laying year.

(10) Egg weight is controlled primarily by the chronological age of the bird. If the first, tenth or twentieth eggs of birds from full fed and restricted pens are compared, there will be a difference in size because these eggs are laid by birds of different ages. If, however, the egg size is compared at a given age, such as six

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months, seven months, or 12 months of age, there will be essentially no difference in egg size.

(11) Some of the studies suggest that there is a difference in hatchability in favor of the restricted fed birds, but the results are of insufficient magnitude to justify any conclusion.

(12) The results of some tests suggest that feed restriction of confinement reared birds may be much less successful than when practiced on range. It is recommended, therefore, that all confinement reared birds be full fed.

(13) The value of the eggs laid may vary depending upon the season of the year in which they are produced and the purpose for which they are used.

Retirement and Three Promotions Announced By Chase Bag Co.

CHICAGO — Three promotions, a retirement and an office move have been announced by Chase Bag Co.

John P. Grady has been appointed assistant general sales manager of the company. Harrison B. Rue has been named eastern regional sales director. J. A. Sutherlin has been named manager of export sales, succeeding N. G. Kappler who retired Dec. 31 in line with the company's retirement program.

In connection with the promotion of Mr. Sutherlin, the headquarters of the Chase Bag export division was moved Jan. 1 from New York City to the firm's New Orleans branch, located at 4500 N. Dorgenois St.

Mr. Grady, as assistant general sales manager, will assist in the management of all functions related to the sale and promotion of Chase products, under the direction of W. N. Brock, vice president and general sales manager.

A native of LaGrange, Ill., Mr. Grady graduated from DePauw University. He lives in Glen Ellyn, a Chicago suburb.

Mr. Grady has been eastern regional sales director for Chase, and previously served as manager of its Philadelphia branch and as manager of the advertising and sales promotion department. He joined the firm in 1939.

Mr. Grady will be located in the general sales office of Chase Bag Co. in Chicago.

The eastern region, which Mr. Rue has taken over, represents the territory and sales offices handled by the firm's Buffalo and Philadelphia branches, and its Richmond and New York sales offices. Mr. Rue will continue to make his headquarters in Buffalo and serve as manager of that branch.

Mr. Rue is a graduate of Vanderbilt University. Joining the Chase Bag Co. in 1946 as a salesman, he was affiliated with the New Orleans branch and in 1950 was transferred to Buffalo as sales manager. In 1953 he was promoted to manager.

Since joining Chase Bag Co. in 1945, Mr. Sutherlin, the new export manager, has been associated with the New Orleans sales territory as sales manager. In this capacity he has been active in export operations handled from the Gulf port.

A native of New Orleans, Mr. Sutherlin attended Tulane University.

525,000-BU. ADDITION

LINCOLN, NEB.—Work has started on a 525,000-bu. addition to the Lincoln Elevator & Feed Co. here. The company will nearly triple its capacity to 850,000 bu. Present capacity is 325,000 bu.

FEED STORE OWNER DIES

TOOELE, UTAH — Mrs. Frances Dalton, owner of the Dalton Feed Store, Tooele, Utah, died recently. She formerly was a partner in the feed store with her husband who died a year ago.

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Feed Service Bulletin Board

Helpful Notes on Feeding and Management for Feed Men and Their Customers

Proper Records Important

Properly kept records, when thoroughly analyzed, can reveal to the poultrman weaknesses in management which may be costing money, making the cost-price squeeze even tighter, says Bob Griffin, assistant extension poultry husbandman at Texas A&M College.

Of major importance to the commercial poultryman is the cost of flock replacements. Mr. Griffin says the cost should not exceed $2.35 per bird from the chick to the laying house. A close check on brooder house and range mortality; feed consumed and labor required may show ways for cutting the replacement costs.

He advises the keeping of an accurate record on the number of birds culled and the culling date. Was the bird removed before she had a chance to make money? The most profitable hens are those which are in production for a long period including the fall months.

Livability is another factor which influences the success of the poultry operation. A check of the records will reveal death losses and perhaps a cue as to causes. Sanitation in the poultry house is a must along with practices which will prevent disease outbreaks. A vaccination program can be a big help in improving the health conditions of the laying flock.

What about the amount of feed required to produce a dozen of eggs? Mr. Griffin says a good goal is 4½ lb. of feed per dozen eggs. If more feed is required, feed wastage may be the cause. Raising the height of the feeders and putting less feed in the troughs will help prevent waste. The smaller hens use less feed for body maintenance and, therefore, require less feed for producing a dozen of eggs.

A study of the daily egg production record may show that sharp drops are due to housing troubles . . . improper ventilation for example. Labor required to produce a dozen eggs should not exceed five minutes. Finally, is the flock size large enough to be an economical unit? Records will help answer a lot of questions, concludes Mr. Griffin.

◆

Dry-Cleaning Eggs

The rules for dry-cleaning eggs are simple, according to the Ralston Purina Co. Here are several tips for poultrymen, as originally published in the Poultry Tribune:

First, make sure the dirt is dry before attempting to clean it off. Wet dirt or wet manure tends to reduce the effectiveness of the abrasive material by clogging it. Dry dirt comes off much more easily.

The Purina researchers also suggest that abrasive material be changed often enough to make sure that it has good cleaning qualities. Heavy dirty eggs—eggs which are well covered with dirt or heavy chunks of dirt—should be spot buffed before going through the mechanical dry cleaners, if a machine is used.

◆

Leveling Out Milk Production

Leveling out the spring flush and the fall slump in milk production meant $5 a day greater returns to many dairymen this past year, according to Delmar Young, extension dairy advisor from the University of Delaware.

He has just finished a study of 113 Delaware dairy farms enrolled in the greener pastures program this past year. One man who evened out spring and fall milk production got over $30 more a day on his milk check in the fall than if he had let his herd production slump the usual 20% below spring levels, Mr. Young reported. However, this was an unusual case and the average herd of 19 cows which held up in fall production to take advantage of the higher fall milk price grossed about $6.60 a day extra.

Mr. Young stressed that these were gross or total returns. However, he said that they showed that a dairyman could earn an appreciable return for his time and effort if he took the trouble to plan his herd breeding, feed and management program towards a more even milk production schedule the year around. Mr. Young urged that dairymen consider launching such a program in

(Continued on page 63)

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PARTICIPATE IN CONFERENCE—This group participated in the annual production conference held recently by the Albers Milling Co. in Kansas City, when methods and procedures for the year were discussed. Standing, left to right, are: Walter White, Max Shields, Lowell Judd, James McGovern, Dean McClure, Richard Shoop and Lee Chambers. Seated are Robert Nichols, Thomas Simpson, John Turpin, E. W. Kelner, A. P. Herold, James Phillips, Dale Foster, Francis Albers, Jr., and Harold Adams. In addition to Mr. Herold, president of the Albers firm, others from the Los Angeles office include Mr. Kelner, vice president in charge of production, Mr. Albers, assistant vice president in charge of production, and Mr. Chambers, chief engineer. Others in the picture are from the Kansas City office and plant of the company.

KENT DEALER CLINIC—Dr. Damon Catron, professor in the Iowa State College department of animal husbandry, Ames, was the featured speaker at a two-day dealer clinic held recently by Kent Feeds in Muscatine, Iowa. Speaking on swine nutrition, Dr. Catron said, "The best pig starter any hog raiser can buy turns out to be the very cheapest in the long run." Speakers on the program included (shown above from left to right), W. F. Schafenacker, vice president and sales manager for Kent; Roy Luce, assistant sales manager; Dr. Catron; Gage Kent, founder and president of Kent Feeds; O. W. Joiner, vice president and general manager; K. C. Daniels and Wilbur Pobanz, also of Kent Feeds. Not pictured, but also on the program, were Dr. J. B. Pooley, Anchor Serum Co. of St. Louis; Vernon C. Jelley, technical representative of American Cyanamid Co.; F. G. Hocking, R. W. Watson, J. D. Nash and John Vermazen, all of Kent Feeds. Nearly 100 Kent dealers from Iowa, Illinois, South Dakota and Nebraska attended.

FISHERMAN OF THE YEAR—Vying for honors as the fisherman of 1955 from the alfalfa industry is Ervin Burkholder, Consolidated Blenders, Inc., Cozad, Neb., who is shown above with a recent catch at Ocean City, Md. Mr. Burkholder's catch is a 7 ft. 6 in. Marlin which weighed 59 lb.

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Camera Views of the News

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PARTY COMMITTEE—Part of the committee arranging the Chicago Feed Club Christmas party was seated at one table for the dinner and gala entertainment program which followed at the Lake Shore Club Dec. 19. They are, left to right, seated: Richard L. Kathe, American Feed Manufacturers Assn.; Tom Brinegar, Feed Age; William N. Brock, Chase Bag Co., president of the Feed Club; Henry S. French, Feedstuffs, club secretary; Donald R. Rose, Allied Mills, Inc., and Giles J. Williams, Great Lakes By-Products Co.

VISIT LABORATORIES—Three representatives of Master Feed & Seed Co., Inc., East St. Louis, Ill., were recent visitors at the VyLactos Laboratories, Inc., plant at Des Moines, Iowa. Above view in VyLactos analytical laboratory shows, from left to right: Dean Foster, VyLactos sales manager; Don Crowle, salesman, Joe Merck, manager, and Bob Christianson, salesman, all of Master Feed & Seed; Boris Kviesitis, VyLactos chief chemist; Dr. Gary Severson, VyLactos nutritionist, and Duane Morrow, VyLactos district supervisor. The visitors made a complete tour of the plant, viewing the equipment used in dehydrating molasses and fish solubles, and the extensive research facilities at the plant.

STUDENTS ON SCHOLARSHIPS—A number of students in the department of flour and feed milling industries at Kansas State College are studying on scholarships sponsored by the feed industry. The students (left to right) and the companies which sponsor their scholarships are: Arthur H. Fromm, Kansas City, Kansas, Ralston Purina Co.; Alfred D. Broddle, Reese, Kansas, Nutrena Mills, Inc.; Robert E. Wallace, White City, Kansas, Ralston Purina Co.; Larry L. Vincent, Wichita, Staley Milling Co.; Harry C. Kaper, De Motte, Ind., Pillsbury Mills, Inc.; Reinhart B. Billiar, Beatrice, Neb., Ralston Purina Co., and William C. Johnson, Sicistook, Okla., Superior Feed Mills.

1956 since the outlook for milk prices is not too favorable.

Feeding costs run higher in the fall than in the spring, Mr. Young acknowledged, but said that this did not amount to as much as some people have thought. According to Dairy Herd Improvement Assn. records in Delaware, the total feed cost per cow (including pasture) is about $14.10 a month in the spring and $15.90 in the fall months—a difference of only $1.80 a cow per month. But since farmers got 80¢ less a hundredweight for their spring milk this past year than they did during the fall months, those who avoided the fall production slump received about $5 a day more return, regardless.

◆

Lean Hogs Grow Fast, Cheap

Lean-type hogs grow as cheaply as fat-type porkers, according to G. R. Carlisle, livestock extension specialist at the University of Illinois College of Agriculture.

Mr. Carlisle says figures from the Forrest Swine Test Station in 1954 showed little difference between fat and lean hogs so far as rate and costs of gain were concerned. More recent research indicates that, if any advantage in cost of gains exists, it is in favor of lean hogs.

The Ohio Swine Evaluation Station fed two pigs from each of 108 litters separately to compare costs. The lean hogs, which would grade U.S. No. 1 on the market, required 334 lb. of grain to put on 100 lb. of gain. Fat hogs in the test, grading U.S. No. 2 and 3, needed 358 lb. of feed to put on 100 lb. of gain.

Average daily gains in the test were 1.67 lb. for lean hogs and 1.69 lb. for fat hogs.

◆

Advantages of Loose Housing

The advantages of loose housing for dairy cattle were stressed by several speakers at a meeting held at the University of Vermont.

Ivan Bigelow, agricultural engineer, Waterville, N.Y., spoke on construction of low cost housing. The pen stable system is one of the farmer's answers in reducing hours of milking, feeding and caring for cows, he said.

"In addition to cutting labor time, the work can be made easier. Pole barns also have a lower initial construction cost. Disadvantages can be outweighed if the farmer is a neat dairyman with a wholehearted desire for a pen-type barn, and the new barn is planned considering labor saving and good drainage. A sufficient supply of bedding is also necessary," Mr. Bigelow stressed.

Tom Dickinson, Bordens Ottawa (Canada) Dairy Farm, said, "In loose housing it is important to plan everything as separate as possible. We've found this system lengthens cow life, produces cleaner milk, better herd health and less labor. Management is most important."

"Things that are important are: a milking parlor easy to wash with water; a good view of the other areas from the parlor; a bedding hopper; automatic feeding; entrances for tractor; one box stall for every 15 cows; a hardtop paved area and handy bedding storage," Dickinson emphasized.

R. E. Nichols, New York State Department of Health, Albany, said, "It is important to keep animals dry and clean. Our five-year study in New York found that cleanliness is equal, mastitis is the same or reduced and there are fewer injuries to the animals in loose housing than in conventional stables."

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Outdoor Display Pays Dividends in Extra Sales

By Al. P. Nelson

The feed dealer who has a loading platform which is suitable for display in practically all kinds of weather, has a show window which can win many extra sales, says H. L. Iba, owner of the South Side Feed Store, 500 S. 9th St., Lebanon, Pa., who has been operating his establishment for the past 31 years.

Mr. Iba has a long loading platform with a canopy over it, and this means that rain or shine, merchandise displayed there does not get wet. Early each morning, Mr. Iba and his employees get out their assortment of feeds, dog food, garden tools and other items, so as to catch the attention of the farm traffic which passes into and from Lebanon on a busy highway.

"We do not have a retail showroom as such," points out Mr. Iba, "and so we make this loading platform our store and our windows, too. Whenever a farmer drives up for feed or other farm supplies he can't help seeing the lineup of merchandise which we have here. And we get a lot of extra sales from such displays." He suggests that even if a dealer does not have a canopy over his loading area, he can still use the platform for effective display on many days of the year.

It should also be mentioned that Mr. Iba regards neatness as very essential in outdoor displays. Disorder in platform displays can kill the display effectiveness of the showings, he says. Customers usually find Mr. Iba's outdoor displays neat as a pin.

Mr. Iba has built a sizable business in dog food during the past few years. He usually displays dog food packages outdoors every day and dog food customers spot them and drop in for supplies. One satisfied dog owner, too, will tell another that it's easy to drive in to this feed store and pick up dog food in any amount needed, and this helps to swell trade.

"We do a little advertising on dog food in local newspapers," says Mr. Iba, "but for the most part it's outdoor display and good products that bring the dog owners here."

The largest share of Mr. Iba's feed volume is on poultry feed, both for layers and broilers. This accounts for about 60% of his volume. Dairy feed is about 30% of volume, he states. He also sells flour, insecticides and poultry and livestock remedies.

Mr. Iba has a sense of humor and this is very valuable in dealing with

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customers. For instance there is a sign in his office which says, "Keep Your Temper . . . Nobody Else Wants It." That copy gets a chuckle from many farmers.

This feed dealer also issues a calling card which is in considerable demand by farmers and one which they do not throw away. The card contains a Mystic Age calendar, and also a bit of verse, besides advertising the South Side Feed Store.

By using the Mystic Age calendar the farmer can challenge anyone to fool him on his age, that is, up to 60 years of age. The person whose age is to be guessed tells the card holder whether his exact age appears in any of the six blocks of copy on the card. If it does, the card holder merely adds the last number of the top line in each block in which the age appears. The result of this addition from each block totals up to the prospect's full age. Mr. Iba says:

"Farmers have a lot of fun with that Mystic Age calendar. They are always coming in to get an extra card or two to give to a relative or friend. That carries my advertising into a lot of rural areas."

Standing beside one of the displays that is daily put on the loading platform of the South Side Feed Store, Lebanon, Pa., is H. L. Iba, owner of the store for 31 years. Mr. Iba says the platform displays stimulate extra sales.

The bit of verse printed on the card is interesting, too. It is entitled, "A Guy I Like"—

Gimme the guy with a straightforward eye.
With a grip that will hurt your hand;
With a tongue that he uses, but never abuses;
A mind that can understand.
A gink that brags of his mother,
And thinks all women the same!
Who toils with a smile,
A lad you can't rile,
One who puts his whole heart in the game.

From these illustrations it can easily be seen that Mr. Iba's calling card is different, and perhaps it can serve as an inspiration to other feed dealers to design, print and circulate calling cards which are different from the hundreds of others that farmers receive nowadays.

Another source of income for Mr. Iba is a big 16-ton scale which he operates. Many industrial, wholesale and other concerns use it regularly for weighing their loads. Charges are from 15 to 25¢ per load. There is an easy drive-in from the highway to the scale and back onto the highway again. This facilitates the flow of traffic for this service.

Mr. Iba is proud of the fact that he has had very low credit account losses in the 31 years he has been in business. He keeps a close watch on possible delinquent accounts and contacts them by letter or person when the account is overdue.

"Prompt action is necessary to get such accounts to pay up," he says. "The longer the dealer waits, the harder it is to collect."

Your best assurance for a *continuous* supply is a completely integrated supplier!

Kraft Bag Corporation comes closest to being the most completely integrated manufacturer of multiwall shipping sacks in the industry!

Check this chart and see for yourself why Kraft Bag Corporation should be your supplier!

Tell us when we may call to discuss your requirements.

FEATURES	KRAFT BAG CORPORATION	OTHER SOURCES ?
Forest Lands	✓	
Pulp Mill	✓	
Bleach Plant	✓	
Paper Mill	✓	
Multiple Bag Plants	✓	
Natural Kraft	✓	
Colored Kraft	✓	
Bleached Kraft	✓	
Creped Kraft	✓	
Wax Laminated Kraft	✓	
Asphalt Laminated Kraft	✓	
Wet-Strength Kraft	✓	
Water Repellent Kraft	✓	
Stak-LOK Super Rough Kraft	✓	
Valve Bags—sewn or pasted	✓	
Open Mouth Bags—sewn or pasted	✓	
Flat Sewn Valve Bags	✓	
Flat Sewn Open Mouth Bags	✓	
KRAFT-lok Valve Closure	✓	
Creped Tape	✓	
Gummed Tape	✓	
Filter Cord	✓	
Sewing Thread—(the only material we do not produce ourselves)		
1-2-3-4 Color Printing	✓	
Art Department	✓	
Bag Development and Research	✓	

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NEW! BROWER Junior Creep Feeder
• For the individual farrowing pen — gets pigs on high potency rations early.
• Takes care of litter of 10 pigs.
• Holds 16 lbs. creep starter.
• Can be used as grit box for poultry.
No. 1CF — Made of rust-resisting Armco Zincgrip. Designed to prevent feed waste. Width 12½", depth 6½", height 14¼". Height trough edge 2½". Shipped set-up. Weight 6 lbs.
Write for details and low dealer prices.
BROWER MFG. CO., 515 N. 3rd, Quincy, Ill.

Feeding Studies for the Evaluation Of Animal By-Products

By DR. E. R. BARRICK
North Carolina State College

EDITOR'S NOTE: Up to this time, most of the reported research with animal fat in feeds has been done with poultry. In the accompanying article, Dr. E. R. Barrick, animal industry department, North Carolina State College, reports on research with feeding animal fat in swine and cattle rations. This article is the text of a talk he gave at the recent convention of the National Renderers Assn. in Chicago.

* *

With the growing need for increased efficiency in the production of meat, continuous research on means of best utilizing available feed ingredients is desirable. The rapid acceptance of low cost animal fat as an ingredient in animal feeds after sufficient research was conducted to show its value, is a good example of the use of an available ingredient to make more efficient rations. At the North Carolina Agricultural Experiment Station we became interested in feeding studies with animal fat in 1950 and initiated swine feeding trials with beef fat accumulated and rendered in our own meats laboratory. Since that time the North Carolina Renderers Assn. has provided the fat for this feeding work.

Our work with swine has shown that the pig has the ability to make efficient use of animal fat added to the diet. The use of 10% fat in rations for growing-fattening swine has reduced the feed required per 100 lb. of gain by an average of 60 lb. or approximately 17%. Although this is more fat then would normally be added to the feed, it does demonstrate the pigs' ability to utilize fat. Carcass studies have shown that carcasses of fat fed animals have not been appreciably fatter than those of the control animals which were fed diets without added fat except in those instances where the added fat resulted in a marked increase in rate of gain.

Recent studies have shown that swine will also perform well on diets very high in fat (41% animal fat) if adequate protein, minerals and vitamins are provided.

Performance of Pigs Fed a Diet Containing 41% Animal Fat

	Control Diet Corn and Supplement	Diet with 41% Added Animal Fat
No. of pigs	32	32
Av. initial wt., lb.	52	52
Av. final wt., lb.	191	186
Av. daily gain, lb.	1.64	1.60
Feed per lb. gain, lb.	3.60	2.39

Fed to Cattle

Feeding trials with cattle at the North Carolina Agricultural Experiment Station have shown that the addition of 5% animal fat to a fattening ration has reduced the pounds of

(Continued on page 69)

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Adding Lipamone to your feed is easy – 1 lb. of Lipamone plus 9 lbs. of carrier makes 10 lbs. of pre-mix; 10 lbs. of pre-mix in 1 ton of broiler finisher makes a Liponized best-seller.

Premium prices are being offered by alert processors who recognize the quality features of Liponettes.

We are urging growers to discuss Lipamone with their feed dealers. Are you fully acquainted with the Lipamone story? We'll be glad to give you complete information and to answer your questions.

important new words for the broiler industry

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Liponizing: the process of adding LIPAMONE to feed, or feeding birds the LIPAMONE-supplemented ration.

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Illinois Reports on Study of Pregnancy Disease in Ewes

URBANA, ILL.—The results of an experiment by Dr. Elwood F. Reber at the University of Illinois College of Veterinary Medicine support the theory that pregnancy disease in ewes is a result of poor nutrition and can be prevented by proper feeding.

Dr. Reber produced pregnancy disease in ewes by greatly reducing their feed intake, resulting in low levels of sugar in their blood (hypoglycemia). When a ewe's system attempts to convert proteins and fats into energy in order to meet demands that are not being supplied by sufficient food intake, a reaction produces ketone bodies in the blood (ketonemia).

A key to the process is oxalacetic acid. When Dr. Reber fed a derivative of this compound to ewes, the blood sugar levels increased, and ketonemia decreased and the animals started to recover.

Feeding grain as a source of carbohydrate that can be converted easily into blood sugar would prevent the start of pregnancy disease. Dr. Reber says that pregnancy increases a ewe's need for carbohydrates.

Dr. Reber said experiments of this nature have proved that persistent losses from the disease can be prevented almost completely by these measures:

1. Proper feeding with a clover or alfalfa hay and especially a grain ration, such as equal parts of corn and oats fed at the rate of ½ to ¾ lb. per day per ewe during the last four to six weeks of pregnancy.
2. Moderate exercise daily.
3. Supplementing the grain ration with a small amount of molasses, which helps to stimulate the ewe's appetite.

About 75% of the ewes affected with pregnancy disease are carrying two or more lambs. Symptoms are dullness, weakness, staggering, head shaking, teeth grinding and finally collapse and death within about a week.

Treatment may be effective if started as soon as symptoms appear, but 90% of the ewes that develop symptoms do not recover if treatment is delayed or ignored.

Kasco Dog Food Sales Supervisors Named

TOLEDO, OHIO — Two advancements in the sales department for Kasco Dog Food have been announced by Edwin M. Knapp, vice president in charge of dog food sales for Kasco Mills.

Jack E. Dux, Baltimore, Md., formerly a sales representative, has been appointed sales supervisor for Kasco sales district three. He will assist H. Stuart Johnston, Malvern, Pa., district sales manager, in directing Kasco Dog Food sales.

Wylie T. Perry, Dallas, Texas, formerly a sales representative, has been appointed sales supervisor for Kasco sales district eight. He will assist W. W. Davidson, Tyler, Texas, district sales manager.

PLANT DAMAGED

CLAY CENTER, KANSAS — Fire of undetermined origin almost demolished the blending room of the Clay Center Dehydrating Co. here, with loss estimated at $2,000. H. H. Eikerman, owner, said the room was almost empty except for equipment. He credited firemen's quick work with saving the remainder of the plant.

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Arno Hangas Charles Firman

JOIN WIRTHMORE—Arno Hangas, since 1942 general manager of United Cooperative Farmers, Inc., at Fitchburg, Mass., has joined Wirthmore Feeds, Malden, Mass. A graduate of the University of New Hampshire, Mr. Hangas has done special agricultural research work there and at Cornell University. He is now making a three-month survey of operations in the Wirthmore production department. Another addition to the organization is Charles Firman, former assistant general manager at United Cooperative Farmers. A graduate of St. Anselms College in Manchester, N.H., Mr. Firman will work with Earl W. Stevens in all phases of bulk feed operations.

New Orleans Board of Trade Posts Record in Grain for Export

NEW ORLEANS, LA. — A record quantity of grain for export was inspected by the New Orleans Board of Trade, Ltd., during 1955. The old record of 80,500,000 bu., established in 1953, was topped by the 85 million bushels inspected in 1955.

Another milestone passed by the New Orleans Board of Trade during the year of its 75th anniversary was the inspection of the billionth bushel of grain processed through the public grain elevator.

In a review of the year's accomplishments, Ben C. Pitts, board president, said that the organization endorsed a measure to provide for a 24-hour quarantine inspection service for ships coming into the port. Other measures which the board came out in favor of, according to Mr. Pitts, included the establishment of the Calumet-Sag project to provide an adequate waterway connection between the Mississippi River inland waterway system and Lake Michigan.

Mr. Pitts also said that the New Orleans Board of Trade contributed $10,000 to the Cordell Hull Foundation for International Education to help bring Latin American students to the U.S., on the premise that the continued growth and prosperity of the port depends heavily on foreign commerce with Latin America.

Flexible Package Co. Merges with Bemis

ST. LOUIS—Flexible Package Co., Chicago, has merged with its parent company, Bemis Bro. Bag Co., it has been announced by H. C. Davis, a Bemis director of operations. A. D. Hoeppner continues as manager of the Bemis Bro. Bag Co. Flexible Package Plant, as this unit is now known.

This operation will be moved to Terre Haute, Ind., as soon as a new building now under construction there is completed. Most of the Bemis polyethylene bag manufacturing eventually will be consolidated there.

Rabbit Drive Held in Oklahoma Panhandle

LIBERAL, KANSAS—An estimated 2,000 jack rabbits will nibble no more wheat nor eat grain off sorghum bundles in the Oklahoma Panhandle, 15 miles southwest of here. The rabbits met their demise in a drive reminiscent of those held in this area in the late 1920s and early 1930s.

A large crowd turned out recently to flush the rabbits out of four sections, a total of 2,560 acres. Drivers lined up on the north sides of the sections and herded the rabbits south into a fence approximately 2,000 ft. long.

The drive was the outgrowth of complaints that rabbits are eating the grain off sorghum bundles and creating a wind erosion hazard by nibbling wheat off level with the ground.

Guns were not permitted. Rabbits were clubbed to death once they were herded against the fence.

The most recent drive was small compared with those held 20 to 25 years ago in this area. Herds in excess of 10,000 rabbits were killed then. It is believed the last rabbit drive here was held in 1935.

Monsanto to Build Headquarters Building, Research Laboratory

ST. LOUIS — Monsanto Chemical Co. plans to construct a group of general headquarters buildings in a campus-like setting on a tract of land owned by the company at Lindbergh and Olive Streets in St. Louis County, it was announced recently.

Construction will start as soon as possible. It is anticipated that facilities will be ready for occupancy by late 1957. Plans call for three almost identical office buildings, an executive building, and a utility building. The three principal office buildings will each contain three floors. Approximately 300,000 sq. ft. of floor space will be provided.

The buildings will be grouped to make the most effective use of the rolling terrain on the 252-acre tract. Landscaping and planting, utilization of existing wooded areas, and attractively planned roads and walks will be included in the project. No manufacturing facilities are ever contemplated at the site.

Construction will be started at the same time on a laboratory building at the Creve Coeur location for the research department of the company's Inorganic Chemicals Division.

Monsanto now operates two large manufacturing plants in the city of St. Louis, one at 1700 South Second St. and one at 8201 Idaho Ave., which covers more than 18 city blocks, including parking areas.

Ohio Elevator Short Course Scheduled

COLUMBUS—Feb. 27-March 2 has been set as the period for the annual elevator management - farm supply merchandising short course sponsored by the Ohio Grain & Feed Dealers Assn., the Ohio Equity Exchange Co., the Ohio Farmers Grain & Supply Assn. and the Ohio Farm Bureau Cooperative Assn.

The course, limited to 25 students, will be given at Ohio State University's Student Union Bldg.

Included in the course will be such subjects as facilities for grain handling at country points, insurance, the importance of records, operating a country elevator, field trips, merchandising farm supplies, contracts, traffic, office organization, futures and the cash market, marketing grain from farm to kitchen, grain and the economy and certificates. Applications may be sent to John W. Sharp, 210 Townsend Hall, Ohio State University, Columbus 10, Ohio, before Feb. 1.

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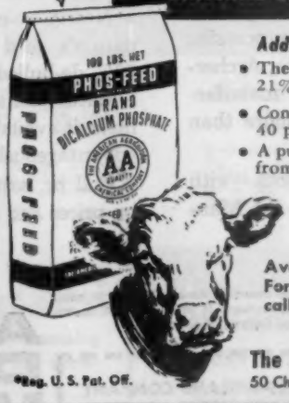

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Advertisement

Many Feed Manufacturers Now Using 50% Meal As Only Source of Soy Protein

By John P. Broshard

Manager, Soybean Oil Meal Department
Archer-Daniels-Midland Co.

Is it feasible to manufacture a complete line of livestock and poultry feeds with 50% soybean oil meal as the only source of soy protein?

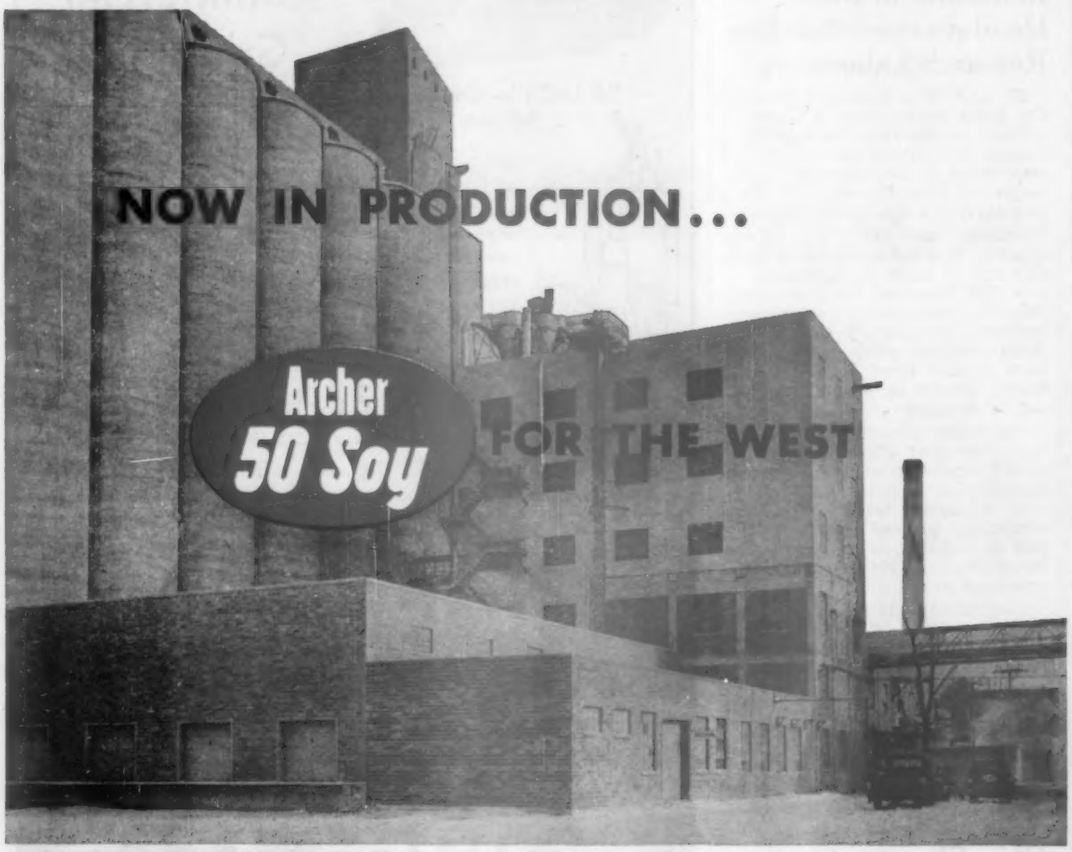
Surprisingly, quite a number of feed manufacturers will answer yes to that question—because they're already doing it.

Until two or three years ago 50% meal was used only as an ingredient in high energy broiler and turkey feeds. It seemed probable then that any growth in its volume would have come through its use in these two types of feeds.

Since then a lot has happened to change the picture. Now high-energy creep feeds for pigs are being made with 50% soybean meal. Many manufacturers are using it in calf feeds. During the past year or more it has been used in considerable volume as an ingredient in high-energy laying mashes.

All of these developments have been factors in creating a demand that the processors can't always meet.

But most intriguing of all is a more recent development which finds a number of feed manufacturers using 50% soybean oil meal as their exclusive source of soy protein in their entire line of feeds. This includes dairy and beef cattle feeds too.



ADM DOUBLES ITS OUTPUT OF 50% SOYBEAN OIL MEAL...NEW FACILITIES NOW OPERATING AT MANKATO, MINNESOTA

With the opening of new processing facilities at Mankato, Minnesota, Archer-Daniels-Midland's capacity for manufacturing Archer 50 Soy is now more than double its former volume.

Located in southern Minnesota—with good western rail connections—the Mankato facilities offer unusually fast service and favorable shipping to western feed manufacturers.

Nearly seven years ago ADM gave the nation's feed manufacturers their first 50% de-hulled soybean oil meal, from its Decatur plant. Now ADM is the first to make it available in the West from a more advantageously-situated shipping point.

Call or write for detailed information on prices and shipping.

New 24-page booklet describes Archer 50 Soy, its uses, and the profit-making advantages it offers to feed manufacturers. Mail the coupon for your free copy.

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700 INVESTORS BUILDING, MINNEAPOLIS, MINNESOTA

Please send me a copy of your new Archer 50 Soy booklet.

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Other ADM feed ingredients:
44% Soybean Oil Meal, 44% Soybean Pellets, 44% Soybean Flakes, 44% Pea-Size Soybean Meal; Linseed Oil Meal, Pellets and Grits; Flax Screenings Oil Feed; Feed Grain, Mill Feeds; Dehydrated Alfalfa; Wheat Germ Meal.

Have they been able to keep costs in line? Obviously they have, or most of them would have abandoned the idea sometime ago. Actually most of them have found that the higher cost of a 50% meal is offset by the fact that they can use a higher proportion of local low-cost mill feeds in formulas in which a high-energy rating is no object. Then too, the cost of soybean oil meal on a protein unit basis is the same or possibly less than 44% soybean oil meal. To which you may reply: "If it does no more than keep costs in line, why bother with it at all?"

John P. Broshard

In answering that, we first must assume that you are now manufacturing one or more high-energy feeds—or that you plan to get into high-energy rations at some future time. We'll assume, too, that you recognize the definite advantages 50% meal offers over 44% meal as an ingredient for these feeds. Perhaps you would like to use 50% meal in your high-energy feeds and continue with 44% meal for conventional mixtures—but are prevented from doing so by a warehousing problem.

Like many other manufacturers, you probably feel you haven't the storage space for two different kinds of soybean oil meal.

Several feed manufacturers solved that problem easily. They now use 50% meal exclusively. They have a superior ingredient for their high-energy feeds, and they enjoy the extra advantage of needing less storage space for their soybean meal. This is because 50% meal has about 7⅛% greater density than 44% meal. Seven tons of Archer 50 Soy, for example, provide as many calories of productive energy as eight tons of 44% meal. And 88 tons of Archer 50 Soy will provide as much protein as 100 tons of 44%. Each of these factors contributes to simpler warehousing.

At Archer-Daniels-Midland, we are convinced that the manufacture of 50% soybean oil meal is entering upon a period of rapid expansion and growth . . . that the demands for this superior product are only beginning to be felt.

This is one of the two major reasons why ADM recently installed new processing equipment at the Mankato plant to more than double our productive capacity. The second reason, of course, is that our Mankato location (southern Minnesota) provides western feed manufacturers with faster service and more favorable shipping than had been available previously.

The Mankato addition is modern in every respect. As in the past, our Archer 50 Soy will continue to set the same high standard of quality. This is because of our controlled-processing, supported by feeding tests, which enables us to produce a meal that not only provides protein of the highest quality but maintains it shipment after shipment.

From its beginning seven years ago there was never a doubt that Archer 50 Soy is markedly superior to 44% meal. Today, with improved processing facilities at our Decatur plant and with brand-new modern equipment at Mankato, you can be sure that Archer 50 Soy is the best it has ever been.

If you want more information on how Archer 50 Soy can fit into your future, write to us at Archer-Daniels-Midland Company, Investors Building, Minneapolis—or clip the coupon in the advertisement on this same page.

FEEDING STUDIES

(Continued from page 65)

feed required per pound of gain by approximately 10%.

Meat scraps and tankage are animal by-product feeds which have long been recognized for their value in supplementing farm grown feeds. Although discoveries in recent years have made it possible to formulate efficient diets for swine and poultry from all-vegetable sources of protein, continued research is revealing means of making the most efficient use of meat scraps and tankage in ration formulation. These materials are valued for the trace nutrients which they contain in addition to their protein, calcium and phosphorus content.

Meat scraps have been known for some time to be somewhat deficient in the essential amino acid tryptophan and more recently tryptophan has been shown to be the principal limiting amino acid in corn and meat scrap rations for swine. Studies have also shown that B-vitamin and antibiotic supplementation will increase the performance of swine fed a ration of corn and meat scraps; however, tryptophan has given a response in addition to that obtained by B vitamins and antibiotics.

We have conducted a preliminary feeding trial with two different sources of soybean oil meal and two different sources of tankage as supplemental protein to corn for growing-fattening swine. The results showed that there was considerable variation in the performance of the animals fed the different sources of protein, although the performance was not poor on any of the diets. The soybean oil meals gave slightly better performance, but a combination of equal parts of the two tankages and two soybean oil meals resulted in performance that was equal to the best individual source of protein.

Recent work has emphasized the importance of amino acid balance in protein utilization. Excellent performance can be obtained with swine fed purified type diets containing much lower levels of protein than are satisfactory when natural feeds are fed. Amino acid balance is considered to be an important factor affecting the performance on natural feeds. Work has been reported which indicates that the lysine requirements of swine vary with the protein content of the diet.

Because of the variation in cost of ingredients, it is at this time not necessarily the most economical to provide the best known balance of amino acids for a given kind of animal. The preparation of a diet from economical sources of ingredients may prove more profitable, even though the balance of amino acids is not perfect. With the exception of methionine, the critical amino acids are not available at a price which will permit their use for supplementing natural feeds. The availability of tryptophan at a favorable price would strengthen the position of meat scraps as a source of protein in swine rations.

Much emphasis is being placed at present on the use of high energy rations and protein energy relationships in rations for young, growing animals. Protein quality becomes more critical in high energy type rations. We have a swine feeding experiment in progress in which a mixture of meat scraps and soybean oil meal is being compared with soybean oil meal as a protein supplement in diets of three different energy levels with three ratios of protein to energy at each level.

Corn Borer Losses Heavy in Indiana

LAFAYETTE, IND. — Corn borers caused an estimated loss of $10,303,200 to the 1955 Indiana corn crop, M. Curtis Wilson, Purdue University entomologist has reported.

He based this figure on a two percent loss for each borer per stalk. Through such a calculation, he estimated that 9,540,000 bu. of corn were destroyed by the borers. This figure is 3% of the Indiana corn yield.

A survey conducted by Mr. Wilson and the other Purdue entomologists revealed that only moderate to light infestations of the first brood occurred in 1955. However, conditions favored a high survival of the second brood which caused most of the damage.

Consultant Named

CHICAGO—R. B. Fuller of Mulberry, Fla., has been appointed special consultant to the Phosphate Minerals Division of International Minerals & Chemical Corp., according to an announcement by George W. Moyers, vice president in charge of the division.

Mr. Fuller has been associated with International nearly 30 years and since March, 1953, has been assistant to the vice president in charge of the Phosphate Minerals Division. Previously he was manager of the corporation's Florida Phosphate Department.

In 1951 Mr. Fuller received an honorary degree as doctor of laws from Florida Southern College for his contributions to the growth of the phosphate industry in Florida and for his participation and leadership in civic, educational and charitable affairs.

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Pig Wormer PREMIX
AVAILABLE TO FEED MANUFACTURERS, LICENSED BY PEMCO PRODUCTS, INC., UNDER PATENT NO. 2,696,455
Farm Chemicals Co. BOX 108 MARION, IND.

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NO DOUBT . . . NO GUESSING! FOR FEED UNIFORMITY

Stop adding the unnecessary ingredient of "Doubt" to your mixing . . . day after day. Instead, start adding to your mixing profits with a Marion Mixer and Marion Molasses Equipment for a top quality mixed product that is absolutely uniformly mixed . . . batch after batch.

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A complete descriptive catalog of the Marion Mixer and accessory line.

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Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.
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HELP WANTED

WANTED EXPERIENCED FEED SALESMAN by old established mill, for either Ohio, Pennsylvania, Michigan, West Virginia or Virginia territories. Ad No. 1383, Feedstuffs, Box 67, Minneapolis 1, Minn.

REPRESENTATIVES — NEW ENGLAND, states touching Great Lakes and Atlantic Seaboard, selling bulk dehydrated alfalfa products. Ad No. 1361, Feedstuffs, Box 67, Minneapolis 1, Minn.

WANTED — MANUFACTURER'S REPRESENTATIVE calling on grain elevators to handle Steinlite Moisture Tester in Indiana. Seedburo Equipment Co., 618 W. Jackson, Chicago 4, Ill.

EXPERIENCED FEED SALESMAN TO represent large eastern feed manufacturer in the state of Virginia. Reply to contain full particulars of past experience. Ad No. 1346, Feedstuffs, Box 67, Minneapolis 1, Minn.

EXPERIENCED DOG FOOD SALESMAN with a following among feed stores, to sell nationally distributed dry dog food. Complete line. Many territories open. Commission and expense allowance. Ad No. 1349, Feedstuffs, Box 67, Minneapolis 1, Minn.

DOG FOOD PROMOTER AND merchandiser to develop dog food business for growing feed company. State qualifications and experience. Ad No. 1359, Feedstuffs, Box 67, Minneapolis 1, Minn.

FEED SALESMAN

Wanted for Midwest area. Free insurance, hospitalization, retirement. High base salary, bonus, expenses paid. If you are experienced in the feed business, this is the lifetime opportunity you are looking for. Our company is nationally known. Age 30 to 50. Reply giving age, marital status, and experience in feed sales or in allied industry. All replies will be handled in strict confidence. Ad No. 1343, Feedstuffs, Box 67, Minneapolis 1, Minn.

Assistant to Advertising Manager Needs Agricultural Background

The man we are looking for is young (25 to 35), enthusiastic and congenial. He should have a working knowledge of feed advertising—experience in animal health sales and/or advertising will be beneficial. He will work as a member of a young and aggressive sales and advertising team for a company well known in the animal health and feed medication field. The man he will replace has been advanced under the company's executive training program.

If you are interested in this opportunity and want to work, under pleasant conditions, for a company with a real growth potential, write—giving full details in your first letter—to:

Advertising Department
Hess & Clark, Inc.
Ashland, Ohio

HELP WANTED

EXPERIENCED MILLWRIGHT FOR FEED mill in New England. Must have experience with pellet mills and practical knowledge of electricity. Excellent opportunity. Forward qualifications and references. Ad No. 1380, Feedstuffs, Box 67, Minneapolis 1, Minn.

SALESMAN—LONG ESTABLISHED MANufacturers of complete line of feed mill machinery desire representation in territory now open. Excellent opportunity for right man to increase his earnings on a commission basis. Write for details giving background and experience. Replies held in strict confidence. Ad No. 1391, Feedstuffs, Box 67, Minneapolis 1, Minn.

SALESMAN WANTED — UNLIMITED OPportunity for live-wire sales-getter with Myzon, Inc., fast growing manufacturer of nationally advertised antibiotic and vitamin feed and water additive specialties for poultry and livestock. Sell only through jobbers and dealers. Several territories open. Livestock and poultry background preferred. Salary, expenses and bonus. Car furnished after six months. Reply by letter only giving full details. Write to Myzon, Inc., Dept. 2C, 3129 W. 47th St., Chicago 32, Ill.

FEED SALESMEN

This is an excellent opportunity. We are an established Midwest Company, expanding our Formula Feed Sales, and are in need of additional experienced feed salesmen to work in our Kansas territories. Salary and commission arrangement offers attractive earnings opportunity, plus sound employee relations program.

Reply giving full information regarding education, training and personal history to Ad No. 1377, Feedstuffs, Box 67, Minneapolis 1, Minn.

NUTRITIONIST

We need man with B.S. or M.S. degree in Animal Nutrition and a few years' commercial feed experience. Will do feed formulation and give technical service to our meal customers.
Should be interested in research and have sales personality. Would be located in Decatur, Illinois. Excellent promotional possibilities, good pay and liberal employee benefits.
Please send complete resume to Personnel Department.

A. E. STALEY MFG. COMPANY
Decatur, Illinois

Experienced Feed Nutritionist

A well known, nationally advertised feed manufacturer, AAA-1 rating, requires the services of a well qualified feed nutritionist who has had substantial experience in feed formulation, registrations, new product development and a knowledge of the laws governing feed control in various states.

This is a very lucrative position, plus a top notch pension-insurance program. Forward qualifications, experience and recent photograph. Information will be held in absolute confidence. Write Ad No. 1381, Feedstuffs, Box 67, Minneapolis 1, Minnesota.

PERMANENT JOB IN FEED FIELD

Good salesmen stay with us for life and make big money. Our nationally known feed specialty is sold to distributors, dealers and large feeders. If you enjoy hard work, good health and reputation, and are successful in your present job but seek a better opportunity, writing us may be the most important step in your career. You must have at least 4 years' experience and a definite following in your territory, and have earned over $6,000 per year net. $6,000 per year starting draw plus expenses. Expansion presents opening in Middle West location. Ad No. 1385, Feedstuffs, Box 67, Minneapolis 1, Minn.

HELP WANTED

AVAILABLE TO AN AGGRESSIVE, INtelligent individual experienced in the sale of poultry equipment and veterinary drugs to dealer organizations—an established territory in New Jersey and New York State. Expenses and transportation provided for. Salary and commissions—state qualifications. Ad No. 1389, Feedstuffs, Box 67, Minneapolis 1, Minn.

HELP WANTED—HATCHERY FLOCK SUpervisor. Must know culling, testing, poultry diseases and be a good record keeper. Year round work. State age, experience and salary expected. Must be able to furnish good references. Work can be started immediately. B. N. Myrick, Myrick's Morris Hatchery, Morris, Ill.

FEED SALES SUPERVISOR

National feed manufacturer has opening for Feed Sales Supervisor. Excellent opportunity for advancement. Age: 30-45. Must have working knowledge of nutrition, capable of supervising feed dealers and sales organization. Territory: Portion of Missouri, Arkansas and Kansas. Send full particulars and recent photo to Ad No. 1379, Feedstuffs, Box 67, Minneapolis 1, Minnesota.

MACHINERY FOR SALE

WHIRLAWAY AIRBLAST CAR LOADERS. J. E. Hagan Mill Machinery, Jefferson City, Mo.

FOR SALE — TYLER-NIAGARA DOUBLE deck screen, 3'x6' motor drive type, T-300, Serial No. 9755. Used one year. Regal Packer By-Products Co., Lynn Center, Ill.

15-INCH JAY BEE HAMMER MILL; TRIumph corn sheller with cob blower. Both excellent condition. Make offer. Earl Schroeder, Knoxville, Iowa.

FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Ad No. 3774, Feedstuffs, Minneapolis 1, Minn.

WHEN YOU ARE IN THE MARKET FOR new or used mill machinery, electric motors or any other equipment, write J. E. Hagan Mill Machinery, Jefferson City, Mo.

WRITE US, WE HAVE WHAT YOU NEED in supplies for feed and flour mills. If it's new or used, buy it from Hughes, Wayland, Mich.

BROWER FEED MIXER, 700-LB. CApacity. First class condition. General Electric 2 H.P., 3-phase motor. Dairyland Milk Corporation, 820 Hampden Ave., St. Paul, Minn.

FOR SALE—NO. 36 VIBROX BAG PACKer equipped with a one H.P. totally enclosed ball bearing motor for 3-phase, 60-cycle, 220/440-volt alternating current, complete with double "V" belt drive and guard. Small round cradle ⅛" throw—440 R.P.M., $200. Sherwood Feed Mills, Inc., 500 President St., Baltimore 2, Md.

FOR SALE—MODEL 81 ROTEX SCREENer, single deck, standard dust tight, 60"x 120" surface, complete with 3 H.P., 1,800 R.P.M., 220/440, totally enclosed motor and four extra screen frames. Used very little. Price $2,250, Rossville, Kansas. Call or write Kaw Dehydrating Co., Box 1098, Topeka, Kansas.

FOR SALE—ENCLOSED MOTORS, RICHardson Scales, truck scales, hammermills, oat crimpers, horizontal and upright feed mixers, sewing machines, elevator legs, screw conveyors, molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

FOR SALE—ONE TON SIDNEY MIXER; one ton Kelly Duplex Mixer; one ton Burton Horizontal Mixer; one No. 100 Triumph Sheller; one 15" Jacobson Mill. All equipment was in operation when larger capacity equipment installed. It is priced to move. Fishbaugh and Devoe, Greenwich, Ohio.

USED ELEVATOR BUCKETS, BELTING and bolts; used electric motors; rebuilt and guaranteed No. 4 American reducers; Reeves speed changers; rebuilt and guaranteed Tag Testers; No. 15 Prater Hammermill; 18" S-W double runner attrition mill, two 15 H.P. direct connected, 230-volt; 16 ft. double chain drag; 6" dia. used screw conveyor; 600 Nu-Hy buckets 12x6, new. Ad No. 1314, Feedstuffs, Box 67, Minneapolis 1, Minn.

MACHINERY WANTED

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

SITUATIONS WANTED

COMPETENT AND SUCCESSFUL GENERal manager and/or director of sales and service, now with one of the country's leading firms, seeks new connection, preferably in Midwest. Ad No. 1360, Feedstuffs, 141 W. Jackson Blvd., Chicago 4, Ill.

INTERESTED IN CHANGE — COLLEGE graduate, sixteen years' experience selling and developing territories for quality feed manufacturer. Have concentrated on opening and developing dealers. Believe in up to date merchandising and feeding practices. Ad No. 1390, Feedstuffs, Box 67, Minneapolis 1, Minn.

BUSINESS OPPORTUNITIES

I WANT TO INVEST IN LARGE VOLUME retail or wholesale feed business in Alabama, Georgia, Mississippi or Florida. Must be moving several hundred tons a month. Ad No. 1317, Feedstuffs, 612 Board of Trade Bldg., Kansas City, Mo.

FOR SALE—TWO DRUM ALFALFA DEhydrating plant located in good alfalfa producing and marketing area in Midwest. Plant is very modern with pelleting equipment and large amount of warehouse space. Picture and details will be sent on request. Ad No. 1388, Feedstuffs, Box 67, Minneapolis 1, Minn.

Contact—
MID-WEST BUSINESS EXCHANGE
When you want to Buy or Sell
ELEVATORS or
FEED MILLS
Ohio - Indiana - Illinois
Excellent Opportunities
Halbert C. Smith Plymouth, Ind.

BABY CHICKS FOR SALE

BABY CHICKS—AS HATCHED OR SEXED —Five popular breeds and one hybrid. Quality - Quantity - Service. Wholesale prices. Milford Hatchery, Liberty Road, Randallstown, Md.

FROM ONE OF THE FEW U.S., N.J. CERtified pullorum and typhoid clean flocks. All breeders from hens that have passed U.S.R.O.P. requirements. These chicks will be sold at competitive utility chick prices this season. Do you want leghorns that can really lay? Try some. Agent wanted. Hodas Poultry Farm, Toms River, N. J.

H. N. Johnson Named To New Purina Position

ST. LOUIS—H. N. Johnson, formerly manager of the Ralston Purina Co.'s mill at Iowa Falls, Iowa, has been transferred to the company's general office in St. Louis as assistant general traffic manager. Mr. Johnson assumed his new duties Jan. 3.

Mr. Johnson became associated with the Ralston Purina Co. at its Minneapolis plant in 1925. From 1927 to 1942 he served as assistant traffic manager and traffic manager of the Minneapolis plant.

In his new capacity, Mr. Johnson will be assistant to T. R. Atchison, the company's general traffic manager. The general traffic department has the responsibility of supervising and coordinating the activities of the traffic departments in all 47 Purina branch plants located throughout the U.S. and Canada, and of coordinating all company activities in the traffic field.

Lindsey-Robinson Holds Sales Meeting

ROANOKE, VA.—"Design for Development" was the theme of the annual sales and service conference held recently by Lindsey-Robinson & Co., Inc., Roanoke, Va., for its regional sales managers, district sales managers and farm service agents.

Representatives from five states attended the four-day meeting. The conference was held to review the progress achieved in 1955 and to present the company's plans for 1956. On the program were Dr. R. T. Parkhurst, director of nutrition and research; R. W. Dickson, farm service director; J. E. Gallaway, director of sales promotion; J. L. Ingles, sales manager, and C. G. Lindsey, Jr., president and general manager.

CATTLEMEN'S PROBLEMS AND PRACTICES

(Continued from page 11)

calves born alive, only 0.19% were dwarfs.

5. Ninety-four percent of the cattlemen reported using purebred bulls only; 40% reported that Production Tested bulls were not available to them; while 22.7% reported that they would not buy Production Tested bulls even if they were available.

6. Nearly half (48.6%) of the cattlemen reported that they breed more than 80% of the heifers to calves as 2-year-olds.

7. Twenty two percent, or about 1 in 5, of the heifers were retained as replacements; whereas 17.8% of the cows were culled. Since cattle numbers were expanded in 1954, the year upon which these figures were based, it is probable that, on the average, about 20% of the heifers are retained each year and about the same percentage of cows are culled.

8. Old cows were culled or removed from the breeding herd at an average age of 9.6 years, and bulls at 6.3 years.

9. Eighty two percent of the cattle calved out on the pasture or range, without a shed or enclosure.

10. Except for the identity of the sire and dam, and the birth date and weight, a higher percentage of commercial operators than of purebred breeders keep production test records.

Management

1. Only 21%, about 1 out of 5, of the cattlemen reported owning scales.

2. Forty three percent of the cows were individually identified, and 36% of the calves were individually identified before weaning.

3. The three leading methods of marking or identification, by rank, were: hide brands, ear marks and tatoos.

4. Calves were castrated at an average age of 2.5 months, dehorned at 5.2 months, and weaned at 7.3 months of age.

5. Most cattle were dehorned by means of saws and clippers. Dehorning with chemicals and use of polled bulls almost tied for second and third positions. Because of the screwworm problem, the use especially popular in the South.

6. The vast majority of cattlemen used the knife for castrating. Because of the screwworm problem, the use of the bloodless method (the Burdizzo) was relatively more popular in the South.

7. Nine percent of the cattlemen reported that they spayed heifers, that they spayed an average of 67.5 heifers each, and that they spayed at an average age of 8.9 months.

8. Ninety six percent of the cattlemen did their own dehorning, whereas 4% had the veterinarian do the work for them; 95% did their own castrating, while 5% called on the veterinarian; and 80% did their own spaying, while 20% had the spaying done by a veterinarian.

Marketing

1. The leading sources of market news information, by rank, were: radio, local newspapers, commission companies, federal market news service, and the Corn Belt Dailies (four livestock dailies in the Corn Belt).

2. The vast majority of cattle—70.8% of the steers and 63.6% of the heifers—were marketed as calves and yearlings. Also, relatively more calves were marketed in the South than in the other areas.

3. Most of the cattlemen marketed their feeder cattle through the following three channels, by rank: local buyers, central markets and community auctions.

4. Most fat cattle were marketed through the following four channels, by rank: direct to packers, central markets, local buyers, and community auctions. Four and one half percent of the cattlemen were responsible for marketing one third of all fat cattle direct to packers; which shows that some very large operators sold direct to packers.

Information and Research

1. The sources of most beef cattle information, by rank, were: magazines, livestock associations, neighbors, county agents and own experiences.

2. The most wanted types of beef cattle research, by rank, were: feeding and nutrition, pasturage and range management, marketing, management, breeding, diseases, parasites, meats, dwarfism, and buildings and equipment.

3. In the dissemination of research, 66% felt that the results are getting out soon enough, 34% felt that they are not; 70% felt that research results are getting out in a form that can be used, but 30% felt that they are not in usable form.

Suggestions for Further Study

Mr. Rogers confided that "in most respects, this study exceeded our fondest expectations. The percentage response was excellent, the quality of the answers was such as to radiate confidence, and the report herewith presented probably represents the most complete and accurate picture ever assembled of the problems and practices of American cattlemen. However, like most research, this study has prompted new questions and opened up new leads which should be explored."

Mr. Rogers' committee recommended that an effort be made to obtain additional data—perhaps (1) from the regular Census of Agriculture, which is taken at five-year intervals by the Bureau of the Census and (2) from the American Veterinary Medical Assn. Through such channels, the following points were suggested:

1. That the survey be nationwide in scope; thus, in addition to the areas covered in this study, it would include the Corn Belt and the North East, in which areas the American National Cattlemens Assn. had few members.

2. That it include enough numbers of the leading beef breeds to provide more conclusive information relative (1) to breed adaptation to different areas, as shown by such criteria as percent calf crop born and weaned, and (2) to the incidence, by breeds, of dwarfism, cancer eye, prolapse of uterus, sunburned udder, etc.

3. That a parallel diseases and parasites study, similar to the one by cattlemen reported on herein, be obtained from the nation's veterinarians.

Persons who desire to delve further into the survey should obtain a copy of Washington Agricultural Experiment Stations (Pullman, Wash.) Bulletin No. 562, entitled "Problems and Practices of American Cattlemen."

W. B. Young

R. Hugh Uhlmann

KANSAS CITY OFFICERS—Elected to the number two and three spots of the Kansas City Board of Trade at the Jan. 3 election were W. B. Young, Goffe & Carkener, Inc., and R. Hugh Uhlmann, executive vice president of the Standard Milling Co. Mr. Young was elevated from second to first vice president and Mr. Uhlmann was elected second vice president. Kenneth S. Hart was elected president.

H. C. Davis

A. L. Park

TWO PROMOTED BY BEMIS—H. C. Davis, manager of paper specialty plants, Bemis Bro. Bag Co., has been appointed director of operations connected with certain of the company's more recently developed products. He will be succeeded as manager of the paper specialty plants by A. L. Park, now assistant to Judson Bemis, director of central operations. Mr. Davis started with Bemis in 1942, working on the development of new products. The following year he was made manager of the new paper specialty plant in St. Louis, and in 1954 was made manager of paper specialty plants with responsibility for the operations at St. Louis, Albion, N.Y., and Crossett, Ark. Mr. Park joined Bemis in 1949 in the general personnel department, St. Louis, and in 1952 was made personnel manager at the company's paper mill and multiwall bag factory at Peoria. His present position as assistant to the director of central operations dates from 1954.

Burlap Volume Higher

NEW YORK—India supplied 85%, or 680 million yards of the 800 million yards of burlap and other jute fabrics used in the U.S. in 1955, it is estimated by the burlap council of the Indian Jute Mills Assn.

Burlap, which is one of India's major money-earning exports, found a big U.S. market. At current prices, the 1955 business represents a value of about $68 million. Burlap sales to the U.S. market in 1955 showed a gain of 5% over 1954 while Canada's imports were up around 10%.

Lamb Feeders Day To Be Held Jan. 17

MORRIS, MINN.—University of Minnesota scientists have been testing various new substances in lamb fattening rations during the past year, and reports on the studies will be presented Jan. 17 at the annual Flock and Lamb Feeders Day at the university's West Central School and Experiment Station at Morris.

Among the topics to be discussed are the value of antibiotics in lamb fattening rations, chicken feathers as a possible protein source and hormones in feeding.

The program also will include other discussions of farm flock production.

Walnut Grove Products To Open New Plant

ATLANTIC, IOWA—The Walnut Grove Products Co., Atlantic, announced recently that its new feed plant at West Liberty, Iowa, will go into operation Feb. 1.

The new plant is the second major plant added by the company since its "4x4" supplements were first introduced. The other plants are located in Atlantic.

The plant will serve customers in eastern Iowa and Illinois.

WHEN IN NEED
of sun-cured alfalfa and lespedeza meal—all grades and grinds; ground ear corn; also ground corn cobs, call
Miller Milling Service
Bowling Green, Ky., Route 3
Phone Woodburn, Ky., Jackson 9-3982

Standard steel elevators, belt and bucket type, available from stock. Ten Heavy Duty sizes, from 300 to 10,000 Bu./Hr., for continuous service and four Light Duty sizes, from 110 to 750 Bu./Hr., for intermittent service. We also manufacture screw conveyors and hoppers. Send your requirements for complete information.
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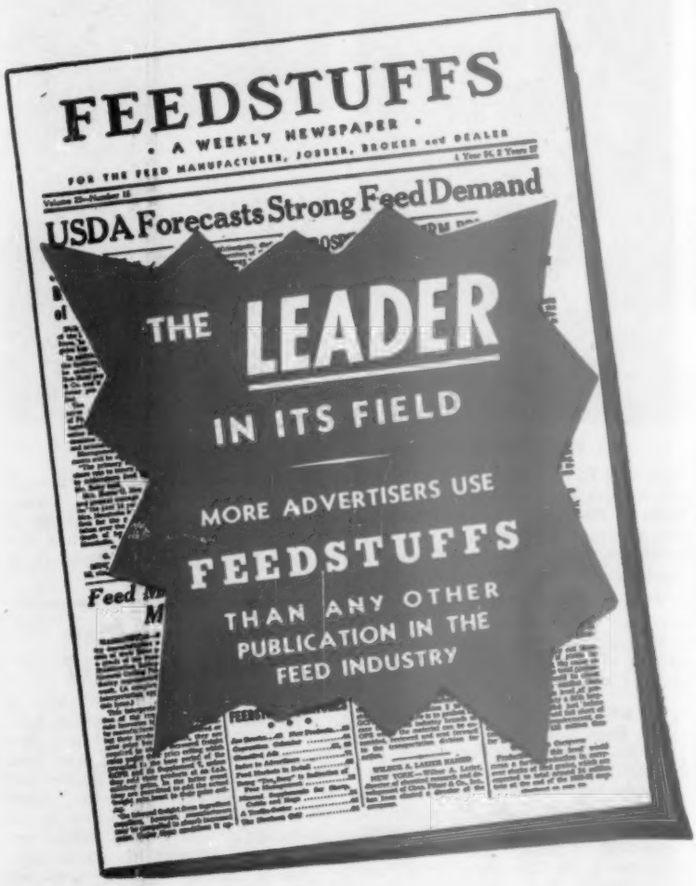
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Feedstuffs:

- Complete, up-to-the-minute news coverage of the entire field facilitated by an interoffice teletype system.
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- More than 400 individual market quotations on feeds in each issue.
- Outstanding features devoted to feed dealers' and manufacturers' business operations — animal nutrition — feed store operations — bookkeeping — new sales techniques—merchandising methods — store displays — tested selling ideas.

Feedstuffs—the only weekly newspaper for the feed manufacturer, jobber, broker and dealer—gives its readers vital information about the products they use, buy and sell. In addition to its paid circulation—largest in the field—selective controlled trade coverage provides concentration in the territory you want to reach. Complementing the coverage regularly provided by paid subscriptions, additional mailings are made on a weekly rotation schedule blanketing each of the four geographic divisions of the United States: Northeast, Southeast, Southwest and Northwest.

You can route your advertising to reach one or more of these specific geographic distributions. This plan of selective controlled trade coverage is fully explained in an analysis of circulation showing the distribution in each classification of the feed industry, by states and geographic sections. A folder describing this coverage, "Occupational Breakdown According to Sectional Distribution," is available by writing to Feedstuffs.

THE MILLER PUBLISHING CO.
The Businesspaper Family Serving the Fields of Flour, Feed, Grain, Baking and Agricultural Chemicals
THE NORTHWESTERN MILLER • FEEDSTUFFS
THE AMERICAN BAKER • MILLING PRODUCTION
CROPLIFE

FEEDSTUFFS

2501 Wayzata Blvd., Minneapolis 5, Minn.
BRANCH OFFICES: New York, Chicago, Kansas City

NEW FARM PROGRAM

(Continued from page 3)

That would produce a total of 200 bu. wheat for which he could obtain the certificate.

The value of the certificate to the farmer would be the price support level for wheat in that crop year, less the cost of production for his area, plus some added incentive or "sweetener" to encourage him to enter the program and not produce additional wheat.

Complications

This certificate arrangement presents some complications that may develop into some ingenious devices within the grain merchandising trades. Speculation in certificate values is seen as an immediate concomitant of the plan.

It is understood that there would be no restrictions on the disposal of certificates by the wheat producer, except that if he took payment in kind, he would not be permitted to pass the payment back to the government under a loan program delivery. This poses some administrative problems but such as may be surmounted.

On making payment in cash to the producer for his wheat, CCC would set-off against this disbursement cash it received from sales of its wheat stocks for export. This item is nothing less than an accounting offset but one which may have to be restored to CCC funds since the certificate redemptions would be a drain on CCC money. The CCC money level is now $12 billion, and the wheat share of that total is approximately $2.5 billion now in CCC inventory.

Conservation Reserve

The second phase of the soil bank program has been named by the administration as the "conservation reserve."

This permanent reserve taken from current crop acreage would amount to approximately 25 million acres—probably the fringe, marginal and hilly land which does not lend itself to field crop production under modern farming techniques and which was brought into crop production through war-produced demand and the continued incentive of rigid high price supports.

For many years, top USDA land use economists have advocated removal of at least 35 million acres of such land from field crop production of wheat, cotton and corn.

The administration proposal notes that acreage controls on the basic crops have caused diversion of this fringe and marginal land into secondary non-acreage-controlled crops such as the minor feed grains, which enlarged feed grain supplies and promoted abnormally large output of swine, cattle and poultry.

Again on a voluntary basis, the President proposes that farmers contract to take out of field crop production 25 million acres and put them into forage, trees and water storage land, regardless of the crop now produced. The message expressed the confidence that much of the 25-million-acre goal could be accomplished in 1956.

To persuade farmers to accept this proposal, the administration asks that the government pay a fair share of costs of establishing the necessary conservation practices up to a per acre maximum to be fixed by regions. There would be a government agreement to maintain payments over a period of years necessary to establish the new use of the land.

To accomplish this necessary incentive for farmers, the administration requests Congress to make a start with an authorization of $350 million for the first year and continue the program at that level for a minimum of three years.

On balance, the two aspects of the soil bank program appear to add to the existing $250 million ACP program, $350 million in new money for the "conservation reserve," the long range aspects for conservation, plus the amount of money that will be given to farmers for their voluntary reductions in acreage allotment crops beyond acreage limitation.

BENSON

(Continued from page 1)

that in view of these seed supply shortages, it would be necessary to go ahead with payments to farmers in advance of seed availability to get the program rolling on schedule and the farmers could start their conservation activities when and if seed supplies became available.

Not Certain Yet

The USDA position on vital matters and even on some broad issues was seen as vague after the Benson testimony. Repeatedly, under questioning, the secretary was compelled to answer that the USDA had not worked out certain details of the programs but he would be pleased to submit full answers later.

Major of such vital matters was the value to be assigned to the certificates made available to farmers under the acreage reserve program. Secretary Benson said such certificates would be geared to the price support level for the crop—meaning that in the case of wheat, for example, the value of the certificate would be the price support, less production costs, plus some additional incentive to encourage the producer to cooperate voluntarily in the plan.

Leading senators such as the committee chairman, Allen J. Ellender of Louisiana, expressed doubt that the voluntary plan would work. Sen. Ellender intimated he would prefer a mandatory plan to remove additional acres over and above the acreage allotment restrictions and to make direct payments to the producers. The Ellender suggestion, while on the surface seems to present a more direct method, slightly disguises an attempt to retain the rigid high price support principle for basic commodities.

On the subject of certificates, the secretary asserted that potentially $1 billion of commodities would be available for certificate payments from Commodity Credit Corp. for voluntary removals of land from production over and above the allotted acreage for the four crops of wheat, cotton, rice and corn.

Previously congressional sources had indicated that probably not more than $200 million would come from certificate redemption or payments in kind to cooperating farmers under the acreage reserve part of the soil bank. These seemingly contradictory expressions reconcile, however. The secretary, in using the term billion dollars, was talking in CCC price support commitments whereas the cash value to farmers of certificates—or in kind—would probably have a net minimum value of $200 to $300 million.

Certificate Value

The secretary declared that the certificate would have a minimum redemption value to the farmers cooperating in the acreage reserve program, fixed at the time the certificate was issued. However, he agreed that if the market price of the commodity for which the certificate was issued increased the value of the certificate would also increase proportionately to the same amount, since the certificate holder could always redeem in kind and market the commodity at the higher market value.

Later it was learned in other USDA circles that it is now contemplated that the value of the certificate to the farmer in cash would be the price support level of the crop, less production costs plus something more than 25% of that net amount.

It is also contemplated that the certificate value would be the same for all wheat producing areas, notwithstanding variations in costs of production between areas.

During the Benson appearance before the committee, there was no mention of a two-price or certificate plan for wheat. However, at the urging of Sen. Ellender, Secretary Benson somewhat reluctantly agreed that a two-price system for rice might be a good testing ground.

Following the secretary's appearance before the committee, the major farm organizations met with the committee in a closed session. It was learned that Sen. Ellender emphasized the need for compromise between these dissident groups to get legislation on the move. One source declared that the various farm groups disclosed a strong community of interest, leading to the hope that even the optimistic deadline for a farm bill in the Senate by Feb. 15, as forecast by Sen. Ellender, may not be impossible. However, a farm bill through Congress by mid-April is a better estimate. The House, with its diverse interests in the farming communities, probably will not be able to reconcile differences as quickly as the Senate.

Corn Problem

The corn aspect of new legislation is virtually left to the Senate. Secretary Benson contributed little more than was contained in the White House farm message. The choice is to include corn in the proposed acreage reserve program or to drop that crop as a basic commodity and set its price support levels on a non-basic discretionary level by the secretary comparable with other feed grains.

The strange harmony within the Senate committee and the relatively pleasant reception of Secretary Benson raised hopes within USDA that it is making headway. The results may be the same, but it is possibly a better appraisal to say that the two price support sides now recognize that their positions are unsustainable and that something new must be developed. In brief, they are both occupants of a sinking ship and any aid now will help them both.

The chief issue within the bipartisan Senate Agriculture Committee will be a partisan issue of how much will Congress grant Secretary Benson to distribute among farmers this coming year.

On the Republican side of both agriculture committees is the knowledge that the present plans are not adequate to do the crop production reduction job needed. But they are stuck with budget limitations. The Democrats, sensing this obstacle, may take the bit in their teeth and recommend an even larger acreage reserve program fund.

LIVESTOCK

(Continued from page 1)

other crops—and the consequences onto other producers—until almost every farmer and rancher, regardless of the crop or livestock he raises, is hurt. More than half the diverted acres has been shifted into oats, barley and grain sorghums—the end product of which has been still more meat, milk and eggs at a time when production was already high and rising.

"In our recommendations, we have given full consideration to the interests of livestock producers," Mr. Benson said. "Cattle and calves are the largest single source of cash farm income—and livestock and its products, taken together, bring in about 56% of all farm income from marketings."

He noted that under the acreage reserve program — where farmers would voluntarily cut acreage below the specified allotment levels for crops under allotments—the farmer would agree neither to graze nor to harvest any other crop from acres put into this reserve. This plan, he said, will cut down on the surpluses and prevent further diversion of acres.

Under the conservation reserve part of the soil bank, farmers will be asked to shift land out of cultivated crops into forage or trees. Any farmer can participate, regardless of crop. The plan, among other things, will alleviate the stimulus to overrapid increases in livestock resulting from feed grain production on diverted acres, Mr. Benson said.

No Grazing

As part of this plan, the farmer must agree not to graze the reserve land. This is aimed to help cattlemen and dairymen at a time when their production is large and prices are depressed.

Among other recommendations in the farm plan is one to protect the family-size farm by putting a limit on size of price support loans. Another proposal deals with improved land use and farming in the Great Plains area. Expanded research is urged to help farming, and proposals for adequate credit for farmers are made.

The administration also wants to lower the re-sale price of USDA stocks of surpluses by removing the statutory resale price of not less than 105% of the price support level plus carrying charges. It is asked that Congress set the domestic resale price at the current support level plus carrying charges. Since in many commodities the flexible support level will fall in coming years, the domestic resale price could be substantially lower.

SUPPORT BOOST

(Continued from page 1)

support boost on economic grounds. They say that there probably will be a further cut in the cotton acreage and a drop in lard output as farmers cut back the pig crop, which would mean the cut in edible fat supplies noted above.

The proposed farm program cutbacks in acreage of basic crops will include control over diverted acres, which might otherwise be planted to soybeans, barley, oats and grain sorghums. This will mean that acreage taken out of basic crops in addition to reductions under acreage allotments cannot be planted in other crops for harvest or grazing.

The price support boost for soybeans and flaxseed is an attempt to maintain not less than the 1955 acreage for those crops—which, in a favorable year, might result in a soybean outturn of not less than 400 million bushels. Before bad weather conditions set in this past year, there were indications that the bean crop would top 400 million bushels.

This would appear to be a plausible reason for boosting the bean support level, but no reasons were advanced for the flaxseed support increase, except for a casual reference that since USDA had been under fire for flexing flexible supports always on the downside, it now took this opportunity to flex on the up-side.

Columbus Feed Club Plans Feb. 3 Meeting

COLUMBUS—The Feb. 3 meeting of the Columbus Feed Club has been designated "country elevator night." Program chairmen will be Newton L. Lynn, White Star Milling Co., Johnstown, and Paul Steckman, Diamond Crystal Salt Co. The Ft. Hayes Hotel will be the meeting site.

At the Jan. 6 meeting members enjoyed a film and talk on Ohio forests, with Robert R. Finley, Ohio division of wild life, as narrator. A social hour and banquet preceded the program.

THE FEED MARKETS

★ ★ ★ ★

Demand — Supply — Trends — Prices

Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $62.25@70.55; 17% dehydrated, no A $52.25@60.55; 13% fine suncured $38 @48.

Portland: Demand good; trend higher; supply limited; 15% suncured $50, delivered Portland; 15% suncured $45, delivered California; dehydrated $55, delivered California.

Seattle: Demand steady; trend firm; supply limited; 15% protein suncured $48.50 ton, delivered, carlots; 136,000 A unit dehydrated $65 ton, delivered, carlots.

Chicago: Demand slow; supply adequate; 17% dehydrated, with 100,000 units vitamin A guaranteed $55.50@56; 17% with no A guaranteed $47@47.50; 15% dehydrated, no A $46.50@46; 13% fine ground suncured $42.50@44.

Los Angeles: Demand fair; trend steady; supply ample; 15% suncured $44; 17% dehydrated $50@51.

Kansas City: Little change in the market with supplies sufficient and demand fair to good; 17% dehydrated alfalfa meal with 100,000 units of vitamin A guaranteed on arrival, blended $57, sacked, Kansas City; straight grades $51@53; no A guarantee $42@45, sacked, Kansas City, depending on sacks; no change in suncured prices.

Boston: Demand light; supply fair; dehydrated 17% $67.50; suncured 13% $51 @54.75.

St. Louis: Demand for dehydrated fair, suncured slow; trend higher; supply of dehydrated limited, suncured adequate; dehydrated, 17%, 100,000 A $56.50 ton; suncured No. 1 fine ground, 13% $44 ton, f.o.b. St. Louis.

Minneapolis: Prices were stable this week, with demand restricted. Quotations: 17% dehydrated, 100,000 units of vitamin A guaranteed $55.50@58.50; granules and oil-treated $60.50 (bulk $3 ton less); non-guaranteed $47; 15% suncured No. 1 $43.

Omaha: Demand fair; supply ample; 17% dehydrated, non A, papers or burlap $42 @44; 17% dehydrated, 100,000 A, papers or burlap $50; 17% dehydrated, 100,000 A, granules or greased, papers or burlap $52; No. 1 fine ground suncured, papers or burlap $40; No. 1 ¼-in., burlap $37; No. 2 ¼-in., burlap $34.

New Orleans: Demand fair; trend steady; supply ample; 17% dehydrated vitamin A guaranteed $59@62; non-guaranteed $55@ 58; 15% $52@55.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $57.50.

Ft. Worth: Demand fair; offerings increasing; 17% protein, 50,000 A $48, basis f.o.b. Plainview area; northern origin, 100,000 A $62.50@63.50, delivered Ft. Worth, depending on origin of tonnage, January shipment.

Philadelphia: Demand dull; supply fair; 17% dehydrated $65.

ALFALFA PELLETS

Omaha: Demand fair; supply adequate; 17% dehydrated, non A $44 bulk, $47 sacked; 17% dehydrated, 100,000 A $48 bulk, $51 sacked.

BARLEY FEED

Ogden: Supply normal; rolled $45@50; whole $38@43.

San Francisco: Demand fair; supply ample; rolled $60.50, ground $59.50.

Philadelphia: Demand dull; supply fair; pulverized $46.50.

New Orleans: Demand slow; supply ample; trend steady; $48@56.

Boston: Demand slow; supply ample; $46.

Los Angeles: Demand fair; trend steady; supply ample; standard rolled $2.94, standard ground $2.90.

Chicago: Demand improved; supply adequate; $37.

Seattle: Demand good; trend firm; supply sufficient; whole $58 ton, ground $58 ton, rolled $59 ton, all ex-warehouse, l.c.l., sacked.

Portland: Demand good; trend higher; supply ample; rolled $59, ground $57.

Baltimore: Demand improved; supply adequate; $46.

BENTONITE (SODIUM)

Chicago: Demand very good; supply adequate; f.o.b. Wyoming and South Dakota shipping points: granular, 30 mesh $15.50; fine granular, 80-100 mesh $12.75; powder, 200 mesh $12.50; f.o.b. Belle Fourche, S.D., minimum 30-ton carlot: 30 granular $12.50 net; 200 mesh fine $12.25 net.

BLOOD FLOUR

New Orleans: Demand slow; supply adequate; trend steady; $55@90, local origin.

Louisville: Demand slow; trend steady; supply normal; $80@85 ton.

BLOOD MEAL

San Francisco: Demand slow; supply ample; $4.85 a unit of ammonia; screened $4.75 a unit of ammonia.

Louisville: Demand dull; trend steady; supply normal; $80@85 ton.

Ogden: Supply normal; $95 ton in 100-lb. bags, f.o.b. Ogden.

New Orleans: Demand fair; trend steady; supply ample; $85@90, local origin.

Los Angeles: Demand fair; trend steady; supply ample; $4.50 a unit of ammonia.

Seattle: Demand slow; trend easy; supply good; $85 ton, f.o.b. local packing plants, l.c.l.

Portland: Demand good; supply ample; trend unchanged; $110.

Cincinnati: Demand fair; trend steady; supply adequate; $120.

Chicago: Demand slow; supply adequate; $115@117.50 ton, guaranteed 80% protein.

BONE MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $80 ton, sacked, f.o.b. Cincinnati.

Ft. Worth: Demand fair; supply sufficient; $35, sacked, f.o.b. Ft. Worth, local manufacture.

Omaha: Demand slow; supply ample; $80.

St. Paul: Market unchanged at $75 in large lots.

Louisville: Demand slow; trend steady; supply normal; $70@75 ton.

San Francisco: Demand good; supply fair; $58.

BONE MEAL (STEAMED)

Seattle: Demand and trend steady; supply limited; $85 ton, ex-warehouse, l.c.l.

Chicago: Demand slow; supply adequate; $65@85.

New Orleans: Demand good; supply ample; trend steady; $82.50@85.

St. Louis: Demand good; trend firm; supply adequate; $90@92 ton, sacked.

Boston: Demand slow; supply fair; $86.

Los Angeles: Demand fair; trend steady; supply ample; domestic $89.50.

Louisville: Demand slow; trend steady; supply normal; $75@80 ton.

Ft. Worth: Demand improved; supply very limited; best quality German production, 72% B.P.L., 14% phosphorus, 31% calcium $74, 100-lb. paper-lined burlaps, f.o.b. Houston.

San Francisco: Demand good; supply ample; $82.50.

BREWERS DRIED GRAINS

Ft. Worth: Demand fair; supply scarce; 25% nominal $60@61, prompt, delivered Ft. Worth.

Louisville: Demand fair; trend weak; supply good; $48 ton.

St. Louis: Demand good; trend higher; supply limited; $47 ton, bulk; $52 ton, sacked.

New Orleans: Demand fair; trend steady; supply adequate; $55@56.

Boston: Demand steady; supply adequate; 26% $55.75, bulk.

Los Angeles: Demand good; trend steady; supply limited; f.o.b. Van Nuys $54.

Cincinnati: Demand fair; trend steady; supply adequate; $59@60.

Chicago: Demand good; supply tight; 24% $53.50@54.

Philadelphia: Demand dull; supply light; $61.

BREWERS DRIED YEAST

Chicago: Demand good; supply limited; 10@11½¢ lb. in carlots; 10¼@12½, l.c.l.

Boston: Demand light; supply steady; 11@11½¢ lb.

Omaha: Demand good; supply poor; 11⅜¢ lb. carloads; 12⅛¢ lb., less than carloads.

Milwaukee: Demand good; supply limited; 10⅛@11⅛¢ lb. in carlots; 10⅝@12½¢ lb., l.c.l.

St. Louis: Demand good; supply limited; 10¢ lb. in carlots; 10⅛¢ lb. in 5-ton lots; 11¢ lb. in ton lots; 11⅛@12¢ lb. in less than ton lots.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11⅛¢.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11⅛¢.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11⅛¢.

New York: Carlots 9⅛¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10⅛¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

Los Angeles: Demand good; trend steady; supply limited; 10¢.

Louisville: Demand fair; trend steady; supply ample; 10¢ lb.

San Francisco: Demand fair; supply good; 10⅛¢ lb.

BUTTERMILK-CONDENSED

San Francisco: Demand fair; supply good; $5.35 cwt.

Ogden: Supply average; $4.90, 100-lb. drum.

Louisville: Demand slow; trend steady; supply normal; $4.25 cwt.

Philadelphia: Demand moderate; supply fair; $4.25.

Los Angeles: Demand fair; trend steady; supply ample; 100-lb. drums $5.50; large barrels $4.75.

Boston: Demand and supply fair; $4.25 cwt.

New Orleans: Demand fair; trend steady to stronger; supply ample; $4.50 cwt.; $5.35, 100-lb. drum.

Chicago: Demand steady; supply fair; $3.50@3.75 cwt. in carlots.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Crystals $12.48, flour $9.42.
Buffalo: Crystals $14.20, flour $10.30.
Toledo: Crystals $15.77, flour $11.77.
Boston: Crystals $14.63, flour $10.62.
Limecrest, N.J.: Crystals $9.50, flour $5.50.

CALCIUM CARBONATE

Cincinnati: Demand poor; trend steady; supply adequate; $8@9.

Seattle: Demand steady; supply ample; trend unchanged; $14 ton, ex-warehouse, truck lots.

Minneapolis: Plain $10; iodized (⅛ lb. KI per ton) $13.50; iodized manganesed $15.05.

Chicago: Plain $8.55 ton in 100-lb. bags, delivered.

Los Angeles: Demand fair; trend steady; supply ample; meal and flour $10.63 ton, carloads; grits $13.03 ton, carloads.

CHARCOAL

New Orleans: Demand slow; trend steady; supply light; 40-lb. bags oak charcoal $2.40; 50-lb. bags poultry $2.55.

Boston: Demand slow; supply steady; $95.

Los Angeles: Demand dull; supply ample; trend steady; poultry charcoal, oak, 40-lb. bags in ton lots $2.40.

San Francisco: Demand steady; supply ample; $59.50.

Chicago: Demand quiet; supply limited; poultry charcoal $102 ton in 50-lb. multiwalls.

COCONUT MEAL

Seattle: Demand fair; trend steady; supply sufficient; $70 ton, ex-dock, 30-day shipment from Philippines.

Portland: Demand slow; trend higher; supply ample; $70.

San Francisco: Demand fair; supply ample; solvent $64, expeller $68.

Los Angeles: Demand improved; trend steady; lighter offers; cake ex-dock, January $68.50@69.

COD LIVER OIL (FORTIFIED)

Boston: Demand slow; supply good; 600 D, 2,250 A 22¢ lb.; 300 D, 2,250 A 21¢; 300 D, 1,500 A 18½¢.

New York: Trend steady; price per lb. in 55-gal. drums (400 to 420 lb.): 300 ICU, 750 A 16@18¢, 1,500 A 17½@19½¢, 2,250 A 19@22¢, 3,000 A 19½@23¢; 600 ICU, 1,500 A 18@19½¢, 2,250 A 20@23¢, 3,000 A 22@ 23½¢; f.o.b. Massachusetts, New York, New Jersey or Pennsylvania. Ranges include variance in offerings and f.o.b. shipping points.

Dayton: Trend steady; price per lb. in 55-gal. drums (410 lb.): 300 ICU, 1,500 A 19½¢, 2,250 A 20½¢, 3,000 A 21½¢; 600 ICU, 1,500 A 20⅝¢, f.o.b. Dayton.

CONDENSED FISH SOLUBLES

Boston: Demand active; supply fair; 4¢ lb.

Los Angeles: Demand good; trend steady; supply light; 5¢.

CORN GERM MEAL

St. Louis: Demand good; trend steady; supply limited; $44 ton bulk, $49 ton in burlap sacks, St. Louis.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $51.77, meal $69.77.
Atlanta: Feed $58.92, meal $76.92.
Birmingham: Feed $57.18, meal $75.18.
Boston: Feed $56.15, meal $74.15.
Chicago: Feed $46, meal $64.
Cleveland: Feed $53.04, meal $71.04.
Denver: Feed $55, meal $73.
Ft. Worth: Feed $53.50, meal $71.50.
Indianapolis: Feed $50.50, meal $68.50.
Kansas City: Feed $46, meal $64.
Louisville: Feed $52.11, meal $70.11.
New Orleans: Feed $54.88, meal $72.88.
New York: Feed $55.69, meal $73.69.
Norfolk: Feed $55, meal $73.
Philadelphia: Feed $55.23, meal $73.23.
Pittsburgh: Feed $53.50, meal $71.50.
St. Louis: Feed $46, meal $64.

CORN OIL MEAL

New Orleans: Demand fair; supply adequate; trend stronger; $52.88@53.88.

Louisville: Demand dull; trend steady; supply normal; $53.50 ton.

Cincinnati: Demand fair; trend steady; supply adequate; $53.50@54.85.

COTTONSEED OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $65.50@68.50.

Seattle: Demand fair; trend steady; supply good; $80 ton, delivered, carlots, 41% expeller process.

Portland: Demand slow; trend higher; supply ample; $65, f.o.b. Los Angeles.

Chicago: Demand fair; supply tight on nearby; hydraulic $68.50@69; solvent $64.50 @65.

Memphis: Demand dull; trend steady; supply tight; prime 41% protein, old process $58, sacked; new process 41% solvent $58, sacked.

San Francisco: Demand good; supply ample; expeller $68.46, solvent $67.46

Louisville: Demand fair; trend strong; supply ample; new or old process $66.33.

Ft. Worth: Demand good; offerings extremely light; carlots, sacked, central and north Texas origin, 41% old process $66; solvent, 41% low gossypol, fat added $62@ 62.50, delivered Ft. Worth, January; pellets $2 additional.

Philadelphia: Demand slow; supply ample; $72.50.

Kansas City: Market steady; demand fairly active; offerings fair; trend unchanged, $53@53.50, sacked, Memphis, for old process; $57.50 for solvent.

Los Angeles: Demand fair; trend steady; supply ample; $63.

Boston: Demand slow; supply good; $72.25@74.

New Orleans: Demand poor; supply adequate; trend steady; 41% old process $74.50 @77.

Ogden: Supply normal; 41% $68@73.

Omaha: Demand fair to good; supply adequate; 41% solvent $71, pellets $73.50.

Wichita: Demand slow; supply ample; 41% $67.50.

Atlanta: Demand fair; trend steady; supply ample; 41% $59, sacked, immediate.

A AND D FEEDING OIL

Chicago: Demand fair to good; supply adequate; straight A feeding oil, with 10,000 units vitamin A per gram $@9½¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago; drums included.

Seattle: Demand and trend steady; supply ample; 300 D, 2,250 A 23¢ lb.; 300 D, 1,500 A 19¢ lb.; 300 D, 750 A 17¢ lb.; all ex-warehouse, drums included.

Minneapolis: All with DPPD—10,000 A 23¢ lb.; 300 D, 2,250 A 20¢ lb.; 300 D, 1,500 A 18¢ lb.; 300 D, 750 A 16¢ lb.

New York: Trend steady; price per lb. in 55-gal drums (400 to 420 lb.): 300 ICU, 750 A 13½@17¢, 1,500 A 15½@19½¢, 2,250 A 17½@21⅜¢, 3,000 A 19½@21¢; 600 ICU, 1,500 A 16@20½¢, 2,250 A 18@19½¢ 3,000 A 20@25¢; f.o.b. Massachusetts, New York, New Jersey or Pennsylvania; ranges include variance in offerings and f.o.b. shipping points.

Dayton: Trend steady; price per lb. in 55-gal. drums (410 lb.): 300 ICU, 750 A 18¢; 1,500 A 21¢, f.o.b. Dayton.

Boston: Demand slow; supply good; 600 D, 1,500 A 17¢ lb.; 300 D, 2,250 A 19¢; 300 D, 1,500 A 16¢; 300 D, 750 A 15¢.

D ACTIVATED ANIMAL STEROL, POWDERED

Kansas City: Demand fair; trend steady; supply adequate; 10⅛@11¢ lb.

Cincinnati: Demand poor; trend steady; supply ample; 1,500 ICU 11@12¢; 3,000 ICU 18¢, warehouse.

New York: Trend steady; price per lb. in 50- and 100-lb. bags or 100-lb. drums; 1,500 ICU 10@13.6¢ bagged, 11@12¢ drums; 3,000 ICU 16@19¢ bagged, 17@18¢ drums, f.o.b. New York and New Jersey.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: $49.50.
Houston: 19% $69.50.
Wales, Tenn.: $62.10.
Coronet, Fla.: Minimum phosphorus 17%, minimum calcium 34%, maximum fluorine .17% $56 net ton, f.o.b. Coronet in 100-lb. multiwall bags, $54 in bulk; minimum phosphorus 14.5%, minimum calcium 34%, maximum fluorine 0.145% $48 net ton, f.o.b. Coronet, in 100-lb. multiwall bags, $46 in bulk.

DICALCIUM PHOSPHATE

Cincinnati: 18% phosphorus $78@81.50.

Portland: Demand good; supply ample; trend unchanged; $96.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $82.99 ton, delivered; $3 ton less in bulk.

Trenton, Mich.: Minimum phosphorus 21%, maximum fluorine .01% guaranteed $84, f.o.b. Trenton, in 100-lb. multiwall bags; minimum phosphorus 18⅞%, maximum fluorine .01% guaranteed $74, f.o.b. Trenton in 100-lb. multiwall bags.

East St. Louis: Monocalcium or dicalcium phosphate, 18⅞% phosphorus $74 ton, bagged, f.o.b. cars.

Adams, Mass.: Minimum phosphorus 18⅞%, minimum 25% calcium, maximum .01% fluorine guaranteed $74 ton, f.o.b. Adams, in 100-lb. multiwall bags. Freight equalized with nearest producing point, carload basis.

Columbia, Tenn.: Minimum phosphorus 18⅞%, minimum 25% calcium, maximum .01% fluorine guaranteed $74 ton, f.o.b. Columbia, in 100-lb. multiwall bags. Freight equalized with nearest producing point, carload basis.

Bonnie, Fla.: Demand improving; supply adequate; minimum phosphorus 18⅞% granular $74. Freight equalized with closest dicalcium phosphate producing point, carload basis.

St. Louis: Minimum phosphorus 18¼%, maximum fluorine .01% guaranteed $74, f.o.b. St. Louis in 100-lb. multiwall bags.

Chicago: Demand fair; supply adequate; stock food grade, 18.5% phosphorus, 20,000 lb. or more $74 net ton in 100-lb. papers, basis Chicago Heights, Ill.; less than 20,000 lb. $79 net ton; 21% phosphorus 20,000 lb. or more $84 net ton, basis Chicago Heights and Nashville, Tenn., less than 20,000 lb. $89 net ton.

DISTILLERS DRIED GRAINS

Cincinnati: Demand fair; trend steady; supply adequate; $52@55.

New Orleans: Demand poor; supply light; trend stronger; $52@53.

Boston: Demand slow; supply good; Canadian light $59; domestic light $61.75.

San Francisco: Demand fair; supply ample; $57.50; solubles $50.

Philadelphia: Demand dull; supply light; $62.

Louisville: Demand heavy; trend steady to strong; supply light; larger producers sold out for January; bourbon light grains $52 ton, dark $53, solubles $76.

DRIED BEET PULP

Cincinnati: Demand fair; trend steady; supply adequate; $61@63.

Ogden: Supply average; $45@50 ton.

Ft. Worth: Demand slow; supply moderate; carlots, 50-lb. papers $66@67, delivered Ft. Worth, January shipment.

San Francisco: Demand good; supply fair; $52.35.

Atlanta: Demand fair; trend steady; supply ample; $73, sacked, immediate.

Boston: Demand steady; supply adequate; Canadian $66, in paper; $67, in burlap.

New Orleans: Demand good; trend steady; supply adequate; $50.88@56.88.

Los Angeles: Demand and trend steady; supply ample; $56.47, paper bags.

Seattle: Demand heavy; trend strong; supply tight; $64 ton, delivered, carlots, California production.

DRIED BUTTERMILK

Chicago: Demand improved; supply tighter; $10.25@10.50 cwt. in carlots.

Boston: Demand fair; supply scarce; 11½¢ lb., nominal.

Los Angeles: Demand fair; trend steady; supply ample; $13.75.

Wichita: Demand slow; supply adequate; $8.25 cwt.

Minneapolis: Market somewhat easier, with production increased; $9.50@11 cwt.

New Orleans: Demand fair; trend steady; supply limited; $11.50@12 cwt.

Ogden: Supply normal; $8.65, 100-lb. bag.

Louisville: Demand fair; trend steady; supply ample; 10⅛@11¢ lb.

Ft. Worth: Demand fair; supply extremely limited; local production $13 cwt., f.o.b. Ft. Worth.

San Francisco: Demand fair; supply ample; $13.75 cwt.

DRIED CITRUS PULP

San Francisco: Demand good; supply fair; meal $55.

Los Angeles: Demand good; trend steady; supply very light; f.o.b. southern California producers' plants: orange $48 sacked, $45 bulk.

Atlanta: Demand fair; supplies ample on pulp, limited on meal; trend steady; pulp $41, meal $40.50, sacked, immediate.

New Orleans: Demand fair; trend steady; supply ample; $48@54.

Boston: Demand poor; supply plentiful; $49.86.

DRIED SKIM MILK

New Orleans: Demand fair; trend steady; supply adequate; $12@13.50 cwt.

Boston: Demand fair; supply ample; 12¢ lb.

Los Angeles: Demand fair; trend steady; supply ample; $13.50.

San Francisco: Demand and supply fair; 13½¢ lb.

Minneapolis: Market steady at $11.50@12 cwt.

Louisville: Demand fair; trend steady; supply ample; 12@12½¢ lb.

Philadelphia: Demand moderate; supply fair; $13.

Cincinnati: Demand fair; trend steady; supply adequate; 11½¢.

Portland: Demand good; supply ample; trend unchanged; $12.50.

Chicago: Demand steady; supply adequate; $11.50 cwt. in carlots.

DRIED WHEY

Cincinnati: Demand fair; trend steady; supply adequate; $6.

Portland: Demand good; supply ample; trend unchanged; $6.50.

Seattle: Demand steady; supply ample; trend unchanged; $7 cwt., ex-warehouse, l.c.l.

Chicago: Demand steady; supply scarcer; $6 cwt. in carlots.

Kansas City: Demand fair; trend steady; supply moderate; straight grade $6 cwt., partially delactosed $6.50.

Los Angeles: Demand fair; trend steady; supply ample; fortified $6.15, unfortified $6.

Boston: Demand poor; supply plentiful; 6¢ lb.

New Orleans: Demand fair; trend steady; supply sufficient; $6.15@6.50 cwt.

San Francisco: Demand steady; supply good; $6 cwt.

Ogden: Supply normal; $6.90, 100-lb. bag.

Louisville: Demand fair; trend steady; supply ample; 6@6½¢ lb.

Ft. Worth: Demand fair; supply adequate; carlots, standard $6 cwt., sacked, delivered Ft. Worth or any Texas point or in ton lots, f.o.b. warehouse, Ft. Worth.

Philadelphia: Demand moderate; supply fair; $6@6.25.

FISH MEAL

New Orleans: Demand good; trend steady; supply scarce; 60% $162@165.

Boston: Demand good; supply scarce; $155.

Los Angeles: Demand better; supply ample; trend steady; $2.30@2.35 a unit of protein.

Chicago: Demand slow; supply adequate to demand; menhaden fish meal, 60% protein, f.o.b. East Coast $148@150 ton; 60% blended West Coast $140; Northwest herring-salmon blend $140; herring meal 73% protein $2.15@2.20 a unit of protein.

Portland: Demand slow; trend lower; supply ample; $2.20, f.o.b. Vancouver; $2.40, f.o.b. California.

Minneapolis: Market steady to easier; 60% $160@164; 70% herring $3.10@2.15 a unit of protein, West Coast.

Atlanta: Demand fair; trend steady; supply limited; 60% $162, sacked, immediate.

Cincinnati: Demand fair; trend steady; supply adequate; $160@170.

Seattle: Demand slow; trend easier; supply good; Canadian herring meal $2.25 a unit protein, delivered; local production $2.30 a unit protein, Seattle.

Ogden: Supply normal; $2.20 a unit, f.o.b. Coast; 65% $171@173.

Louisville: Demand fair; trend steady; supply ample; $160@165 ton.

Ft. Worth: Demand fair; supply sufficient; pilchard fullmeal 63% pro., solubles added back $157; 60% pro. Angola $152.50, f.o.b. Houston, January.

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San Francisco: Demand slow; supply ample; $2.45 a unit of protein.

HAY

Ogden: Supply normal; $1.25 bale; $24@30 ton in the barn.

Louisville: Demand quite dull; trend weak; supply heavy in offerings, stocks reasonable; jobbers quoting all No. 1 hays, such as timothy, alfalfa, clover or mixed clover and timothy or other mixes, at around $30 ton or less; lespedeza $25 tops; straw $13@14.

Ft. Worth: Demand fair for alfalfa, practically nil for others; supply sufficient; carlots, baled, No. 1 alfalfa $38@40, No. 2 $35@38; prairie, No. 2 $28@30; Johnson grass, No. 2 $26@28, delivered TCP.

Philadelphia: Demand and supply fair; as to quality $32.

New York: Demand fair; trend steady; supply adequate; timothy, No. 1 $36@39, No. 2 $30@36, No. 3 $26@28; most buyers are reported covered for 30 days or more, with no inclination to add to positions.

Wichita: Demand slow; supply plentiful; prairie $18@22, alfalfa $25@30.

St. Louis: Demand good; trend firm; supply ample; No. 1 timothy $25@28 ton; No. 1 prairie $25@28 ton; No. 1 alfalfa $26@28 ton; No. 1 clover $18@20 ton; straw $14@15 ton.

Cincinnati: Demand slow; trend strong; supply adequate; No. 1 timothy (new) $21; first cutting No. 1 alfalfa (new) $31, second cutting $25; fancy No. 1 clover and timothy mixed $27; No. 1 red clover $23; bright wheat or oat straw $16.

Seattle: Demand heavy; trend strong; supply limited; $50 ton, delivered, for U.S. No. 2 green.

New Orleans: Demand slow; trend steady; supply adequate: timothy and clover $27@28; baled alfalfa $35@36; prairie $27@28.

Boston: Demand steady; supply plentiful; No. 1 timothy $38@40, No. 2 $35; second cutting alfalfa $47.

Los Angeles: Demand fair; trend steady; supply ample; U.S. No. 1 $33.50@34.50; U.S. No. 2, leafy $31.50@33.50; U.S. No. 2 green $31@32; U.S. No. 2 $29@30.

HOMINY FEED

Kansas City: Demand fair; offerings moderate; market slightly easier; $45.50@46, sacked, Kansas City.

Boston: Demand slow; supply ample; $51.50, bulk, January shipment.

New Orleans: Demand fair; trend easier; supply adequate; $44.88@47.88.

Omaha: Demand good; supply short; $41 bulk, $46 sacked.

Memphis: Demand poor; trend steady; supply ample; white $45, yellow $49.

Louisville: Demand fair; trend stronger; supply ample; $49 ton.

Seattle: Demand and trend steady; supply good; $61 ton, delivered, carlots, sacked.

Cincinnati: Demand fair; trend steady, supply adequate; $49@50.40.

Chicago: Demand good; supply very limited; $48@48.50.

LINSEED OIL MEAL

Ft. Worth: Demand fair; supply adequate; carlots, 36% or better $78.82 January, $77.82 February through June, delivered Ft. Worth; pellets $2.50 premium.

Kansas City: Trend a little stronger; offerings moderate but demand light in this area; $56.50@57, bulk, Minneapolis.

Los Angeles: Demand fair; trend steady; supply ample; $64.

Boston: Demand spotty; supply adequate; $82@83.

New Orleans: Demand slow; trend steady; supply scarce; 32% or better $75.50@78.

Louisville: Demand good; supply fair; trend stronger; new process $73.95 ton; old process $78.45.

Omaha: Demand fair to good; supply adequate; 34% expeller $76, pellets $78.50; 36% solvent $70.50, pellets $73.

Minneapolis: Demand was reported good, with some processors out of the market for January. Quotations: 36% January shipment $57@57.50, February forward $56.50, bulk, Minneapolis; 22% flaxseed screenings oil feed $42.50, bulk, Minneapolis.

Chicago: The linseed oil meal market was slightly weaker during the week ending Jan. 11. Export orders for flaxseed declined and the failure of important domestic buying of meal to develop kept prices on the easy side. Quotations Jan. 11: solvent linseed oil meal $66.50@67, expeller $73@73.50.

Wichita: Demand fair; supply sufficient; 34% $81.

San Francisco: Demand and supply fair; $70.

Philadelphia: Demand dull; supply fair; $77.

Portland: Demand slow; supply limited; trend unchanged; $64, f.o.b. Los Angeles.

Cincinnati: Demand fair; trend steady; supply adequate; $73.25@78.25.

Seattle: Demand slack; trend steady; supply sufficient; 36% solvent $86 ton, 30% expeller $82 ton, both delivered, sacked, carlots.

MALT SPROUTS

Cincinnati: Demand fair; trend steady; supply adequate; $49@50.

Chicago: Demand and supply fair; No. 1 $44@44.50.

St. Louis: Demand good; trend firm; supply ample; No. 1 bulk $36 ton, No. 2 bulk $33 ton, No. 1 sacked $42 ton.

New Orleans: Demand fair; trend steady; supply adequate; No. 1 $43@45.

MEAT SCRAPS

Kansas City: Market about steady; 50% meat and bone scraps $70@72.50, sacked, Kansas City.

Los Angeles: Demand good; trend steady; supply limited; $1.55 a unit of protein.

Boston: Demand fair; supply steady; $1.10 a protein unit; converted 50% $67.50.

New Orleans: Demand fair; trend firm; supply sufficient; 50% meat and bone $74.50@80, local plants.

San Francisco: Demand fair; supply good; $1.50 a unit of protein.

Louisville: Demand dull; trend steady; supply heavy; $65@70 ton.

Ft. Worth: Demand fair; supply sufficient; meat and bone, 50% $65@70, sacked, f.o.b. or delivered Ft. Worth.

Ogden: Supply normal; $75 ton in 100-lb. bags.

New York: Demand and trend steady; supply adequate; 50% $67.50, 55% $72.50, bulk; 50% $70, 55% $75, sacked.

Portland: Demand slow; supply ample; trend unchanged; $1.35.

Cincinnati: Demand fair; trend steady; supply adequate; 50% $64.50 ton, sacked, f.o.b. Cincinnati.

Seattle: Demand slow; trend easy; supply ample; $67.50 ton, ex-warehouse, truck lots.

Chicago: Demand slow; supply heavy; 50% protein $62.50@67.50; 55% $77.

Omaha: Demand slow; supply ample; $72.50.

St. Louis: Demand fair; trend steady; supply ample; 50% $70@72.50 ton bulk, $75@77.50 ton in paper sacks, $74@76.50 ton in burlap sacks.

Wichita: Demand good; supply about offsets demand; 50% $72.50, f.o.b. plant; 55%, no quotations, no offerings.

St. Paul: Market steady at $70 for 50% meat and bone scraps.

MILLFEED

Minneapolis: Bran showed moderate strength this week, but other types were about unchanged. Demand for sacked bran appeared strongest in Wisconsin. The firmer tone also was attributed to an advance at Kansas City. Quotations: bran $38.50@39, standard midds. $38.50@39, flour midds. $41.50@42, red dog $43@43.50.

Kansas City: Activity slowed down a little, yet offerings reduced and trend seems to be stronger; bran $36.25@37, shorts $36.25@37.

Omaha: Demand fairly good; supply adequate; bran $36.50, shorts $36.75; standard midds., bulk $34.

Wichita: Demand slow; supply sufficient; basis Kansas City, Jan. 10: bran $36.25@36.75, shorts $36.50@37; bran declined 25¢ ton and shorts 50¢ ton, compared with the preceding week.

Ft. Worth: Demand active for bran, slow for shorts; offerings of bran moderate, shorts plentiful; carlots, burlaps, prompt, wheat bran $43@44.50, gray shorts $43@44, delivered Texas common points; unchanged to 50¢ lower on bran, $1.50 lower on shorts, compared with previous week.

Chicago: The millfeed market was quiet during the week ending Jan. 11, with bran and standard midds. losing some ground. Heavier millfeeds were steady. The market showed heavier tendencies near the end of the period. Quotations Jan. 11: bran $42.50, standard midds. $42.50, flour midds. $46@47, red dog $46@47.

St. Louis: Demand slow; trend weak; supplies plentiful; bran $40.50@41, shorts $40@40.50, St. Louis switching limits.

Louisville: Demand good; trend easy; supply fair; bran $46.20; mixed feed $46.49; shorts $46.70; middlings $46.70.

Cincinnati: Demand fair; trend steady; supply adequate; bran $47@47.50, middlings $45.50@46.20.

New York: Demand slow; trend fairly steady; supply sufficient; bran $51.50@52, standard midds. $51.50@52.

Boston: Demand cautious; supply adequate; bran $53.40, middlings $52.90.

Philadelphia: Demand spotty; supply ample; bran $51.50, standard midds. $51, red dog $64.

New Orleans: Demand fairly good; trend steady to stronger; supply adequate; bran $46@47; shorts $47@47.50.

Memphis: Demand poor; trend steady; supply ample; wheat bran $43; gray shorts $43.50; standard midds. $42.

Seattle: Demand and trend steady; supply good; $43 ton, delivered, carlots, common transit points.

Portland: Demand good; trend higher; supply ample; $43.

Ogden: Supply normal; to Utah and Idaho: red bran and mill run $42, middlings $47; to Denver: red bran and mill run $49, middlings $54; to California: red bran and mill run $49.50, middlings $54.50, f.o.b. San Francisco and Los Angeles.

San Francisco: Demand fair; supply ample; $48; red bran $53.50.

Los Angeles: Demand fair; trend steady; supply ample; mill run, Utah-Idaho billing, sacked $49.50@50; red bran, delivered CCP, sacked $54@54.50.

MILLET

St. Louis: Demand fair; trend firm; supply ample; recleaned Early Fortune $3.50

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TERMINAL ELEVATORS:
Kansas City, St. Louis, Chicago, Buffalo, Omaha, Toledo, Columbus, Fort Worth, Portland, Galveston, Enid, Minneapolis, Norfolk, Nashville, Louisville, Memphis, Houston

supply ample; $4.50 a unit of ammonia.

Seattle: Demand slow; trend easy; supply ample; $4.50 a unit of ammonia.

Cincinnati: Demand poor; trend steady; supply adequate; $3@9.

1,500 A 16@20¼¢, 2,250 A 18@19¼¢ 3,000 A 20@25¢; f.o.b. Massachusetts, New York.

Los Angeles: Demand fair; trend steady; supply ample; $13.50.

cwt., sacked; reclaned White Proso $3.75 cwt., sacked.

MINERAL FEED

Ogden: Supply normal; $105 ton, 50-lb. blocks; $95 ton, granular, 50-lb. bags.

Ft. Worth: Demand fair; supply ample; all-purpose granules $82, block $92; mineral phosphorus 6%, granules $95, block $105; cattle-sheep mineral, 7% phosphorus, granules $92, block $101; hog mineral phosphorus 3½%, granules $82; phosphorus 2% $69 (all in 50-lb. paper bags).

Sioux City: 50-lb. mineral blocks, 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

Wichita: Demand good; supply about offsets demand; all-purpose with iodine, 50-lb. blocks $92.50, 100-lb. bags $87.50, f.o.b. plant.

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Portland: Demand good; supply ample; trend unchanged; $42.

Seattle: Demand steady; supply ample; trend unchanged; high phosphorus mixtures $65 ton; competitive brands $44 ton.

MOLASSES

Ft. Worth: Demand good; supply ample; blackstrap, 14¢ gal., f.o.b. Houston, carlots, delivered Ft. Worth, cars and/or truck $30.94, seller's market price on date of shipment, maximum 15¢, January-February shipment.

Minneapolis: Prices were firmer this week, with Gulf offerings at 11½@12¢ gal.; California $24 and Portland-Seattle at $25, Coast.

Louisville: Demand fair; trend stronger; supply ample; 11¾¢ gal., in tank car lots, f.o.b. Gulf ports.

Memphis: Demand poor; trend higher; supply ample; blackstrap 11½¢ gal., tank car, f.o.b. New Orleans.

Atlanta: Citrus molasses—demand good; supply limited; trend steady; $19 ton, bulk, f.o.b. Florida producing points, immediate.

San Francisco: Demand and supply good; $24 ton, f.o.b. cars Richmond, Cal.

New York: Trend steady; blackstrap 12½¢ gal., tank cars, tank wagons, f.o.b.

Beaumont: Trend steady; blackstrap 11¢ gal., in tank cars and tank wagons, f.o.b. Beaumont.

Portland: Demand good; supply ample; $25.

Cincinnati: Demand fair; trend steady; supply adequate; 10½@11½¢ gal., New Orleans.

Seattle: Demand steady; trend firm; supply good; $25 ton, f.o.b. Seattle, tank carlots.

Kansas City: Somewhat lighter offerings with the market firmer and demand fair; 11½@12¢ gal., New Orleans, for nearby and January.

Los Angeles: Demand good; trend steady; supply ample; $24, f.o.b. tank cars; $24.25, f.o.b. tank trucks, both Los Angeles harbor.

Boston: Demand steady; supply adequate; 15¢ gal. in tank cars.

New Orleans: Demand fair; supply ample; trend stronger; 11½¢ gal. in tank cars, f.o.b. New Orleans.

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MIACIS

New York: Trend firm; $8 kilo, 50-kilo lots; $8.10 kilo, 10-kilo lots; $8.20 kilo, 5-kilo lots; $8.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Louisville: Demand fair; trend stronger; supply ample; reground $21.90; rolled oats $54.40; feeding oatmeal $78.40; pulverized white oats $48.40; crimped white oats $65.40.

Memphis: Demand poor; trend lower; supply ample; 3½% protein, reground oat feed $21.30.

St. Louis: Demand fair; trend steady; supply ample; reground oat feed $17.50 in 100-lb. burlap sacks; pulverized white oats $45 ton, choice $46.

Philadelphia: Demand dull; supplies light; pulverized white oats $50.50; Canadian oat feed $34.50 nominal, domestic $24.50.

Ft. Worth: Demand fair; supply adequate; oat millfeed $44.80; reground oat millfeed $25.30, delivered Ft. Worth.

Minneapolis: Market somewhat easier, with demand limited. Quotations: feeding rolled oats $80, standard pulverized $43, feeding oatmeal $67, reground oat feed $18, crimped oats $56.

Chicago: Demand improved; supply adequate; reground oat feed $15@15.50; fine ground feeding oatmeal $68@70; feeding rolled oats $80@82.

Portland: Demand good; trend higher; supply ample; rolled $63, ground $60, cleaned $63.

Cincinnati: Demand slow; trend steady; supply adequate; reground oats $20@21; pulverized white oats $47; rolled oats $36.

Seattle: Demand and supply good; trend steady; feed oats $63 ton, ground oats $63 ton, rolled oats $67 ton, all ex-warehouse, l.c.l.

Los Angeles: Demand fair; trend steady; supply ample; white, pulverized $64.

Boston: Demand steady; supply adequate; Canadian white pulverized $48.50; ground mixed $45; reground oat feed $21.

New Orleans: Demand good; trend firm; supply adequate; pulverized white oats $50@57; mixed feed oats $43.50@45.

OYSTER SHELLS

Louisville: Demand good; trend firm; supply ample; $20.39 ton.

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Portland: Demand slow; trend lower; supply ample; western $29, eastern $35; granite and crystal grits, both $25.

Seattle: Demand and trend steady; supply good; eastern $35 ton, western $28 ton, both ex-warehouse, l.c.l.

Boston: Demand and supply steady; in paper $21.44.

Los Angeles: Demand fair; trend steady; supply ample; local $18.25, eastern $26.

New Orleans: Demand good; trend firm; supply ample; $15@17, local origin.

PEAT MOSS

San Francisco: Demand fair; supply ample; $3.35 bale.

Philadelphia: Demand dull; supply ample; $2.90, f.o.b. pier.

Chicago: Demand good; supply ample; $3.65@3.75 standard 7½ cu. ft. bale.

Los Angeles: Demand fair; trend steady; supply ample; Canadian $3.40 in 300-bale lots, delivered California; German and Holland $3.45, main line points.

Boston: Demand steady; supply adequate; $2.90@3 bale.

New Orleans: Demand good; trend steady; supply adequate; 100-lb. bales German moss $3@3.35.

POTASSIUM IODIDE, U.S.P.

New York: Trend steady; U.S.P. granulated and powder, free-flowing powder $1.90 lb. in 200-lb. lots, $1.92 lb. in 100-lb. lots, $1.95 lb. in 25-lb. lots; 90% KI in calcium stearate, calcium carbonate or magnesium carbonate mixtures, $1.81 lb. in 200- and 250-lb. lots, $1.83 lb. in 100-lb. lots, $1.86 lb. in 25-lb. lots, f.o.b. New Jersey; freight prepaid except on 25-lb. lots.

St. Louis: Demand fair; trend firm; supply ample; 100% pure potassium iodide, U.S.P., 250-lb. average in drums $1.90, 100-lb. lots in fiber drums $1.92; potassium iodide calcium stearate mixture, 225 lb. in leverpak drums $1.81, 100-lb. lots in fiber drums $1.85.

RIBOFLAVIN

New York: Trend firm; feed grade (in feed supplements): 6¢ gram in 3.63 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

RICE BY-PRODUCTS

Memphis: Demand poor; trend steady; none available; bran $42 (nominal), sacked, f.o.b. Arkansas points.

Ft. Worth: Demand fair; supply scarce; carlots, rice bran $39@40, prompt shipment, f.o.b. south Texas rice mills; hulls $3@4, f.o.b. mills.

Atlanta: Demand slow; trend steady; supply limited; bran $48.25, sacked, February.

San Francisco: Demand good; supply fair; bran $55, polish $62.

Los Angeles: Demand fair; trend steady; supply ample; bran $53.61.

New Orleans: Demand fair; supply light; trend stronger; bran $41@45; no quotes on hulls.

SCREENINGS

Cincinnati: Demand fair; trend steady to easy; supply adequate; Canadian $28; barley $18@22.

Chicago: Demand improved; supply plentiful; ground grain screenings $30.25; Canadian, bulk $22.25.

Minneapolis: Canadians were off $1 ton but domestics were unchanged; demand light. Quotations: country run $18@22, lights $5@14, mediums $14@22, heavies $22@30; Canadian $15, bulk, Duluth; Canadian ground $25, sacked, Duluth; flax screenings $20.

New Orleans: Demand slow; trend weak; supply limited; 3/64 in. grind $39@41.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Chicago: $22@22.75.
Kansas City: $22.15@22.80.
St. Louis: $21.40@22.
Des Moines: $22.50.
Philadelphia: $21.55@22.15.
Minneapolis: $23.15@23.85.
Buffalo: $22.50@23.10.
Atlanta: $18@18.70.
Memphis: $19.40@19.95.

SORGHUMS

Cincinnati: Demand fair; trend steady; supply adequate; $2.65.

COTTONSEED OIL MEAL FUTURES

Closing prices of cottonseed oil meal (41% protein) on the Memphis Merchants Exchange in dollars per ton (bulk):

	Jan. 6	Jan. 9	Jan. 10	Jan. 11	Jan. 12
July	49.50@ 50.00	49.50@ 50.25	49.50@ 50.00	49.50@ 50.25	49.00@ 49.25
October	50.30@ 50.50	....@ 51.25	51.40@ 51.75	51.00@ 51.75	....@ 51.00
January	....@*52.80	....@*53.50	....@ 54.00	....@ 54.00	....@*53.25
March	49.50@ 50.50	49.70@ 50.00	....@ 49.70	49.50@ 49.90	49.00@ 49.50
May	48.75@ 49.00	48.75@ 49.00	48.50@ 49.00	48.50@ 48.85	48.00@ 48.50
December	....@*50.25	51.25@ 52.50	51.00@ 52.00	51.00@ 52.00	51.10@ 52.10

*Bid.

SOYBEAN OIL MEAL FUTURES

Closing prices of soybean oil meal (basis Decatur, Ill.) on the Chicago Board of Trade and on the Memphis Merchants Exchange, in dollars per ton (bulk basis):

CHICAGO

	Jan. 6	Jan. 9	Jan. 10	Jan. 11	Jan. 12
January	....@ 50.75	50.50@ 51.00	50.25@ 50.30	50.30	....@ 50.35
March	....@ 51.40	51.50@ 51.55	50.95@ 51.05	50.90@ 50.95	....@ 51.00
May	52.55@ 52.60	52.70@ 52.80	....@ 52.25	....@ 52.20	52.10@ 52.15
July	52.95@ 53.00	53.35@ 53.40	....@ 52.75	52.65@ 52.75	52.50@ 52.55
August	53.00@ 53.10	....@ 53.55	52.90@ 53.00	52.90@ 53.00	....@ 52.90
September	51.80@ 52.25	52.95@ 53.00	52.00@ 52.25	51.60@ 51.95	....@ 51.75
October	....@	51.00@ 53.00	51.40@ 51.80	51.45@ 51.75	....@ 51.25

MEMPHIS (unrestricted)

	Jan. 6	Jan. 9	Jan. 10	Jan. 11	Jan. 12
January	....@ 50.50	....@ 50.75	50.25@ 50.50	50.40@ 50.50	....@ 50.25
March	....@ 51.30	51.55@ 51.70	....@ 51.00	50.80@ 51.10	51.00@ 51.10
May	52.60@ 52.75	52.90@ 53.25	52.25@ 52.40	52.25@ 52.40	52.10@ 52.25
July	....@ 52.95	....@ 53.35	52.60@ 52.90	....@ 52.60	52.50@ 52.60
August	....@ 53.00	53.50@ 53.75	52.90@ 53.10	52.75@ 52.90	52.75@ 52.90
September	51.50@ 52.10	52.35@ 53.25	52.00@ 52.50	51.50@ 52.00	51.60@ 51.75
October	50.75@ 51.25	....@ 51.60	51.25@ 51.50	50.75@ 51.25	51.00@ 51.10
December	50.25@ 51.25	51.50@ 52.50	51.25@ 51.75	50.75@ 51.50	50.75@ 51.25

Ft. Worth: Demand slow; supply sufficient; carlots, bulk, No. 2 yellow $2.16@2.22, delivered Texas common points.

Los Angeles: Demand moderate; trend steady; supply ample; No. 2 milo, delivered CCF, prompt $2.68%.

SOYBEAN OIL MEAL

Wichita: Demand slow; supply sufficient; 44% $66, f.o.b. Wichita.

Atlanta: Demand fair; trend steady; supply ample; 44% $68.50, sacked, immediate.

Chicago: Fair trading activity in soybean oil meal was reported during the week ending Jan. 11. Prices remained unchanged during the period, but some traders said a slight heaviness was apparent near the end. Quotations Jan. 11: 44% protein soybean oil meal, unrestricted $61.50@62.50.

Memphis: Demand fair; trend steady; supply ample; prime 44% solvent $58, sacked, f.o.b. Arkansas points.

Minneapolis: Prices eased off this week as demand slowed. Quotations: $45@45.50, bulk, Decatur.

San Francisco: Demand fair; supply ample; $77.57.

Louisville: Demand fair; trend steady; supply ample; $62.80 ton.

Ft. Worth: Demand light; supply sufficient; carlots, 44% $70.50@73, depending on origin; truck lots $65, prompt, delivered Ft. Worth.

Ogden: Supply normal; $85@90.

Decatur: Demand fair; supply adequate; 44% bulk, unrestricted $51.50@52.

Portland: Demand slow; trend higher; supply ample; $47.50.

Cincinnati: Demand fair; trend steady; supply adequate; $51.50, bulk, Decatur.

Philadelphia: Demand spotty; supply ample; $50, bulk, Decatur.

Seattle: Demand slack; trend steady; supply ample; $79.50 ton, delivered, sacked, carlots, January shipment.

Omaha: Demand fair to good; supply adequate; 44% solvent $63.50; 41% expeller $66, pellets $68.50.

Los Angeles: Demand fair; trend steady; supply ample; $77.07@78.07, delivered CCP.

Boston: Demand slow; supply plentiful; $50, bulk, Decatur.

New Orleans: Demand fairly good; trend higher; supply ample; $69@71.50 on 40%.

Kansas City: Little change in the market in this area although unrestricted seems to be showing a little strength; for Kansas City and West $48@49, bulk, Decatur; unrestricted $51.50@52, bulk, Decatur.

SUNFLOWER SEED

St. Louis: Demand fair; trend steady; supply ample; large black $17.50 cwt.; large gray $17 cwt.; medium black $16 cwt.; medium gray $14.50 cwt.; small black and gray $10 cwt.

TANKAGE

Wichita: Demand good; supply adequate; 60% $72.50, f.o.b. plant.

St. Louis: Demand fair; trend steady; supply ample; 60% $72.50@75 ton bulk, $77.50@80 ton in paper sacks, $76.50@79 ton in burlap sacks.

Ft. Worth: Demand fair; supply moderate; 60% digester $77.50@80, f.o.b. Ft. Worth.

Louisville: Demand dull; trend steady; supply good; $70@75 ton.

Chicago: Demand slow; supply heavy; 60% protein $67.50@75.

Cincinnati: Demand fair; trend steady; supply adequate; 60% digester $70@74.50.

Kansas City: Trend about steady; 60% digester $70@72.50, sacked, Kansas City.

St. Paul: Market unchanged at $65 for 60% digester.

Los Angeles: Demand fair; trend steady; supply ample; $1.35 a unit of protein.

New Orleans: Demand poor; trend steady; supply ample; 60% $74.50@80, local plants.

Omaha: Demand slow; supply ample; $72.50.

WHEAT GERM MEAL

New Orleans: Demand fair; trend steady to stronger; supply limited; $66@71.

Chicago: Market stronger at $64.

CCC Rough Rice Offered at Dallas

DALLAS—The Commodity Stabilization Service has announced that it is offering for sale on competitive bid basis about 308,757 cwt. rough rice for domestic use as a feed or feed ingredient or for export for feed or industrial uses.

Bids must be received by the Dallas Commodity Office not later than noon Jan. 16. The rice is stored at Hitchcock, Texas, Sterling, La., Jonesboro and Stuttgart, Ark., and Crowley, La.

MILLFEED FUTURES

The following is a comparison of settling prices at Kansas city for Jan. 5 and 12:

Bran—	Jan. 5	Jan. 12
January	$....@ 36.50	$36.75@ 37.50
February	37.35@ 37.45	37.10@ 37.90
March	38.00@ 38.50	38.05@ 39.25
April	38.75@ 39.50	39.10@ 40.25
May	37.60@ 37.70	36.05@ 37.90
Shorts—		
January	$36.90@ 37.10	$37.60@ 38.50
February	37.90@ 38.50	38.55@ 39.25
March	39.75@ 41.00	39.75@ 41.50
April	41.50@ 42.50	41.25@ 42.25
May	42.00@ 43.70	....@ ....

N.D. Poultry Meeting Will Be Jan. 23-25

FARGO, N.D.—Program plans are set for the North Dakota Poultry Industries convention, to be held Jan. 23-25 in Fargo, according to Irving J. Mork, North Dakota Agricultural college poultryman.

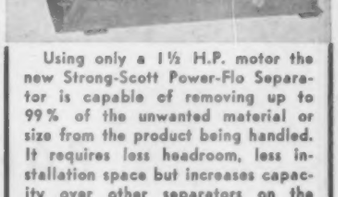
Dr. James Gwinn, Poultry and Egg National Board, will be among the speakers. Another speaker, Hugh Ferguson, A. R. Wood Mfg. Co., Luverne, Minn., will talk on the use of laying cages, and he will demonstrate laying cage systems.

The convention brings together processors, farmers, hatcherymen, feed men and others associated with the poultry business in the state.

SCOTTS HAVE SON

MINNEAPOLIS—Clifford A. Scott, Merck & Co., and Mrs. Scott are the parents of a 9 lb., 11 oz. boy, born on Dec. 31. The new arrival's name is Charles Cameron Scott.

Strong-Scott's Power-Flo Separator Requires Less H.P., Less Headroom, Less Maintenance; Increases Capacity



Using only a 1½ H.P. motor the new Strong-Scott Power-Flo Separator is capable of removing up to 99% of the unwanted material or size from the product being handled. It requires less headroom, less installation space but increases capacity over other separators on the market.

It is available in screen sizes 24, 36, 48 or 60 inches wide and can make one, two or three separations. Write for complete details.

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Excellent References

Columbus Louisville Portland Omaha

UP OR DOWN?

By Leonard W. Schruben
Agricultural Economist, Kansas State College

SEASONAL PRICE TREND FOR MOLASSES

Molasses may be slow in January but feed manufacturers continue to consider molasses as an important ingredient. In this connection, seasonal price trends may be an important consideration; or, perhaps we should say, lack of a definite seasonal tendency may be important.

Seasonal price movements are those regular ups and downs of prices that occur each year. Such changes are especially pronounced in the case of some of the feed ingredients such as the grains. However, some of the other ingredients fail to show significant seasonal changes, and it is likewise important to purchasing agents and feed manufacturer management to have an indication of the lack of seasonal variation of prices.

Molasses prices demonstrate this lack of great seasonal variation, as is indicated in Exhibit 1. Exhibit 1 is an index of seasonal variation based on New York wholesale prices for the years 1925 through 1954. The index is a statistical device for measuring price changes from one season to another.

You will notice in Exhibit 1 that the prices do not change a great deal from one season to the other. This would indicate molasses could be obtained for about as favorable a price at one time as compared with another. But you don't buy or sell on the "usual" market, and therefore you need to take into account that price changes each year differ generally from those of previous years.

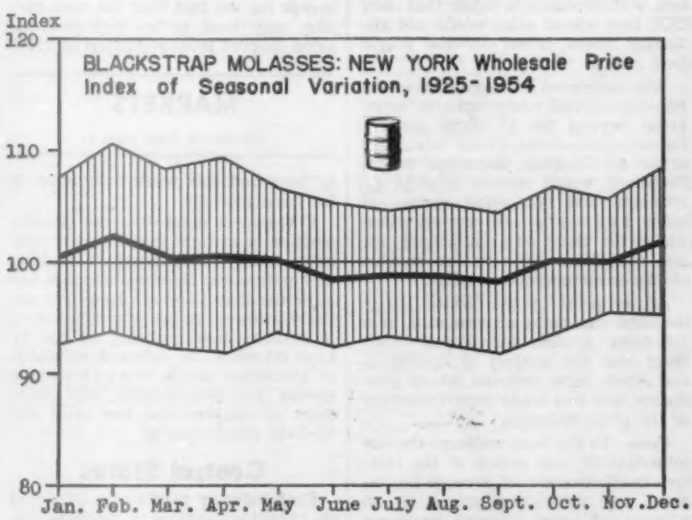

EXHIBIT 1—Blackstrap Molasses: New York Wholesale Price, Index of Seasonal Variation, 1925-54.

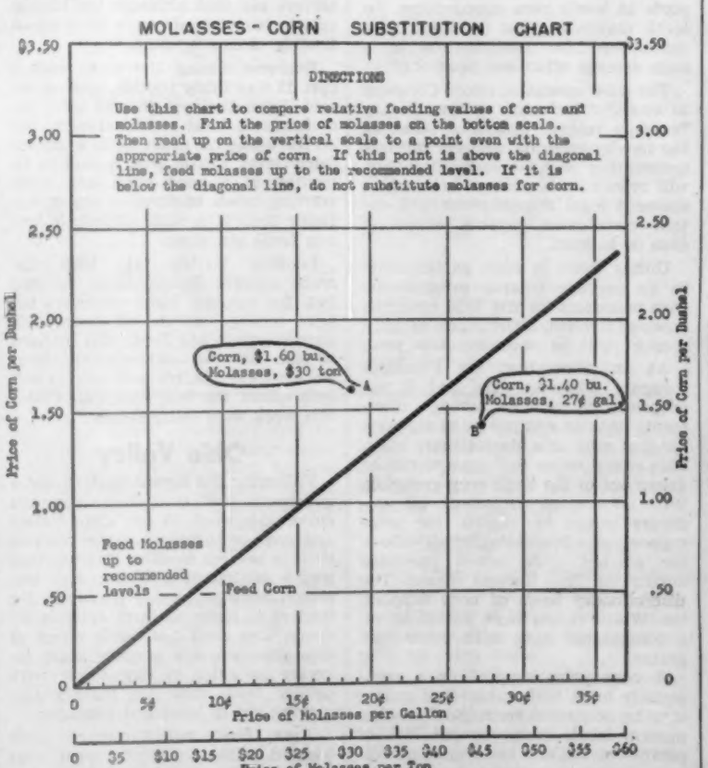
MOLASSES - CORN SUBSTITUTION CHART
DIRECTIONS
Use this chart to compare relative feeding values of corn and molasses. Find the price of molasses on the bottom scale. Then read up on the vertical scale to a point even with the appropriate price of corn. If this point is above the diagonal line, feed molasses up to the recommended level. If it is below the diagonal line, do not substitute molasses for corn.
Price of Corn per Bushel
$3.50
3.00
2.50
2.00
1.50
1.00
.50
0
Corn, $1.60 bu. Molasses, $30 ton
A
Corn, $1.40 bu. Molasses, 27¢ gal.
B
Feed Molasses up to recommended levels
Feed Corn
0 5¢ 10¢ 15¢ 20¢ 25¢ 30¢ 35¢
Price of Molasses per Gallon
0 $5 $10 $15 $20 $25 $30 $35 $40 $45 $50 $55 $60
Price of Molasses per Ton

EXHIBIT 2—Molasses-Corn Substitution Chart.

A reference to history occasionally gives guides whereby management decisions can be made relative to the purchasing of molasses. Note the shaded area around the heavy black line on Exhibit 2. This shaded area indicates the range within which the index is most likely to fall during any given year. In this case the range is comparatively wide. This means that even though the average tends to be fairly stable, variation during any particular year can be considerable.

The fact that molasses can be substituted for other carbohydrates in feeding some kinds of livestock provides an indication of a guide as to the situations in which it may be economically used. Exhibit 2 was prepared to make it easy to compare prices with relative feeding values of corn and molasses. You will like to be alert to changing conditions at all times and this chart will give you an indication as to how livestock feeders may compare relative feeding values with market prices.

Here is how to use Exhibit 2. Suppose molasses is $30 ton and corn is $1.60 bu. delivered to your place. First find the price of molasses on the bottom scale. Prices are sometimes quoted in gallons and sometimes by weight; therefore, scales for gallons as well as tons are given. In our example, the price was $30 per ton.

Next read up until even with the price of corn on the scale on the side (or $1.60 in our example). The point "A" will be above the diagonal line. As is indicated on the chart, the prices in our example meet above the line and molasses would be a better buy than corn when used at recommended levels. Whenever the point is below the line such as combination "B", you can lower cost by substituting corn. The closer they meet the line, the less difference it makes which you buy.

ILLINOIS

(Continued from page 1)

mitted in feed supplements used in rations for breeding animals, dairy cattle, swine, sheep, poultry or any growing animal.

3. Effective Jan. 16, feed supplements may be manufactured and sold in this state containing 0.25% to 1.0% diethylstilbestrol premix (one gram diethylstilbestrol per pound) which will supply 2.5 milligrams to 10 milligrams diethylstilbestrol per pound of manufactured beef cattle supplement, provided the tag shows feeding directions recommending not more than 10 milligrams of diethylstilbestrol per beef animal per day.

4. Each manufacturer of such feed supplements must furnish the Division of Foods, Dairies and Standards with the date and approved number granted to them by the Federal Food and Drug Administration to mix diethylstilbestrol in their feed supplements.

5. Feed supplements containing diethylstilbestrol must be sold in bags bearing the tags approved by this state except that bulk sales are permitted when delivery is made direct from the mill manufacturing the feed supplement to the farm where it is to be fed, provided there is an approved tag attached to each delivery slip and invoice. No storing of bulk feed supplements containing diethylstilbestrol by dealers or salesmen is permitted.

6. Feed supplements containing diethylstilbestrol must bear a tag or label which includes the required information in the proper form, including the warnings conforming to that attached specimen. A facsimile of tags to be used must accompany all licensed applications for approval.

Grain Shippers to Hear Julius Hendel

MINNEAPOLIS—The Minneapolis Grain Shippers Assn. will meet at 5:30 p.m. Jan. 17 at the Covered Wagon.

The speaker will be Julius Hendel, retired vice president of Cargill, Inc., who will discuss changes in agriculture and what the grain trade should do to adjust its operations to these changes.

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Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending:	Maine	Conn.	Penna.	Ind.	Ill.	Mo.	Del.	Md.
Nov. 5	764	577	626	771	130	438	1,395	1,109
Nov. 12	719	465	617	756	135	457	1,336	1,156
Nov. 19	724	626	699	808	205	494	1,350	1,152
Nov. 26	731	484	594	737	170	543	1,468	1,091
Dec. 3	650	592	643	723	180	571	1,194	1,312
Dec. 10	811	542	656	713	137	604	1,371	1,086
Dec. 17	726	441	607	693	157	598	1,495	1,151
Dec. 24	728	467	597	698	127	563	1,614	1,074
Dec. 31	756	587	572	740	130	518	1,607	1,142
Jan. 7	774	489	580	634	172	493	1,588	1,280

Week ending:	Va.	W. Va.	No. Car.	So. Car.	Ga.	Fla.	Ala.	Miss.
Nov. 5	1,025	526	1,291	224	3,166	198	1,143	866
Nov. 12	1,066	439	1,231	207	3,402	171	1,128	786
Nov. 19	1,092	400	1,347	193	3,523	206	1,230	756
Nov. 26	988	403	1,282	218	3,396	165	1,249	966
Dec. 3	1,087	423	1,464	226	3,462	210	1,336	872
Dec. 10	1,157	437	1,368	239	3,617	231	1,372	928
Dec. 17	1,110	475	1,414	214	3,542	242	1,365	933
Dec. 24	1,093	508	1,408	243	3,761	313	1,446	906
Dec. 31	1,197	466	1,366	216	3,693	181	1,319	885
Jan. 7	1,220	507	1,397	190	3,997	213	1,479	897

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 23 areas 1955	1954
Nov. 5	1,495	313	1,745	140	98	931	18,859	14,732
Nov. 12	1,592	276	1,715	194	101	888	18,875	15,043
Nov. 19	1,750	295	1,764	183	113	914	19,474	15,883
Nov. 26	1,707	310	1,748	154	93	879	19,431	15,471
Dec. 3	1,859	292	1,748	174	150	1,002	20,080	15,849
Dec. 10	1,797	266	1,803	128	132	988	20,269	14,533
Dec. 17	1,824	293	1,797	322	121	999	20,448	14,801
Dec. 24	1,807	276	1,624	199	141	1,014	20,459	11,331
Dec. 31	1,730	240	1,708	203	140	1,018	20,416	14,346
Jan. 7	1,699	270	1,742	217	161	1,057	21,055	15,025

KANSAS FEED CONFERENCE

(Continued from page 6)

croflora, the availability of nitrogen in various nitrogen-containing materials.

The artificial rumen is a laboratory tool and the real test is to apply the results to animal-feeding experiments. Ideas can be screened by the artificial rumen, a job that would be difficult to do with the live animals. Several factors, however, limit its use, Dr. Bentley said: (1) The alteration in the flora as a result of the laboratory conditions imposed, (2) inhibition by end products of microbial metabolism. More important, probably, to the interpretation of artificial rumen data is that results are based on a fermentation carried out in a specific time interval and with a medium often made from purified materials. The real practical value of the artificial rumen will come when enough information is available to permit the establishment of points of similarities and differences between the microbial rumen action as indicated by animal performance and in the laboratory, he concluded.

Future of Dairy Rations

In order to survey the future of dairy rations one must take into consideration the increase in grassland agriculture and the increase in utilization of pastures and preserved forages for dairy cattle, said Dr. L. A. Moore, dairy husbandry research branch, Agricultural Research Service. USDA, Beltsville, Md. The shift does not necessarily mean that the dairy farmer is going to purchase less feed per cow, he said, but depending on price relationships it probably means that he is going to produce more milk per cow because of an increased energy intake. Some of the speaker's observations on the future dairy ration were as follows:

(1) Urea probably will be used more frequently. Whether it is used in place of protein concentrates depends upon economics and the availability of these proteins and can be based on the following calculation: If the cost of 1 lb. of urea and 6 lb. of carbohydrate concentrates is less than the cost of 7 lb. of protein concentrates, it is more economical to use urea.

(2) For reasons similar to those on urea, ammoniated products probably will assume a more important role in dairy cattle feeds.

(3) With larger and steadier supplies of molasses now available to the feed trade, its use in feed will continue to increase.

(4) The use of stilbestrol to increase milk production has not been established as yet. Beltsville work bears this out on amounts equal to those fed beef cattle. Some increases have been reported elsewhere, however, and there is evidence of slightly increased digestibility.

(5) Depending upon price relationships with corn, the use of inedible fats will increase. Experiments with calf starter rations using up to 10% inedible stablized tallow have revealed a 5-6% increase in rate of growth. Illinois experiments used an 8.5% level of fat in a producing cow concentrate and the cows consume the mixture readily with no marked effect on milk production or quality.

The addition of minerals to rations will probably not be altered greatly in the future, Dr. Moore said. He went on to note that it appears that milk fever can be controlled by diet by feeding a low-calcium, high phosphorus ration or the feeding of massive doses of vitamin D.

Low Quality Roughage

Utilization of low-quality roughages is a portion of the long-range objective of beef cattle research seeking to reduce the cost of production by more efficient and greater use of roughages, Dr. Bentley declared in his discussion on supplements to poor quality roughages for beef animals. Poor quality roughages are deficient in protein, minerals and other nutrients that can be provided only by proper supplementation, he said.

The value of alfalfa meal in such a feeding program was illustrated by the speaker.

He cited Ohio results which, when considered along with reports from Purdue on growth stimulation obtained from using alfalfa meal in Purdue Supplement A, would seem to indicate that alfalfa meal supplies unidentified factors for beef steers fed poor quality roughage.

Recent studies on unidentified growth factors for rumen microorganisms grown in the artificial rumen would substantiate the animal growth experiments with alfalfa meal, he said, since it is an excellent source of microbial growth factors.

The objective of supplementing low quality roughages is to balance the energy, protein, mineral and vitamin A deficiencies and as a result of proper supplementation to increase the consumption of these feeds, he said. Basically, the supplements are (1) nitrogen, either from protein or urea, (2) energy, (3) essential minerals, (4) vitamin A and (5) a source of unidentified growth factors, such as alfalfa meal.

Relations With Veterinarians

A veterinarian who is familiar with the line of medicated feeds in a dealer's warehouse or at a feed mill can, if he has been properly courted by the feed representatives, use these feeds on a prescription basis, Dr. Morris Erdheim, Dawe's Laboratories, Inc., Chicago, told the group. This arrangement puts veterinarian-feed industry relations in the proper focus: The veterinarian makes the diagnosis, and the feedman mixes and sells the feed.

Another method by which the veterinarian can be helpful is in the actual sale of feeds. Properly informed on nutrition, the advantages of management and formulation of certain feeds, a veterinarian can recommend their use when he comes across nutritional problems in his practice.

Veterinarians are in an excellent position to sell feed because feeders rely on their professional background and experience and actually call them in for advice.

Knowing these above facts to be true, many feed companies now are recognizing the importance of the veterinary profession to their business and are seeking better cooperation and understanding, Dr. Erdheim declared.

WHEAT, CORN

(Continued from page 3)

ecutive. Reduction of consumption of wheat as animal feed has aggravated the surplus accumulation. The President asked Congress to authorize the annual sale for feeding purposes, at the discretion of the Secretary of Agriculture of limited quantities of wheat of less desirable milling qualities, with precautions taken that such CCC feed wheat sales would not adversely affect prices for the major feed grains.

Also suggested was expansion of the non-commercial wheat area to cover areas beyond the 12 states now in the non-commercial wheat belt. Such action by Congress, according to the President, would remove acreage allotments and marketing quotas of many farmers who mainly raise wheat for their own immediate use and contribute little to the surplus stocks or commercial supplies.

At no point in the White House message was there any mention of a two-price system for wheat. That issue was the subject of discussion last week here between wheat producers and two trade representatives of the grain industry.

Corn—In the farm message the administration took notice of the relative ineffectiveness of acreage limitations and marketing quotas as an adjunct of price support programs for corn. The President told Congress that "It is apparent that price supports at levels even approaching the legal maximum are an insufficient inducement for participation in a corn acreage allotment program."

The chief executive asked Congress to consider inclusion of corn in the "acreage reserve program"—that is, the nearby program wherein farmers cooperating with acreage allotments will reduce such acreage below government legal requirements and obtain certificates payable either in cash or in kind.

Unless there is such participation in an acreage reserve program by corn producers for the 1956 crop, the message implied, lower levels of price support will be necessary this year.

As an alternative, the President suggests Congress may find it appropriate to remove acreage allotments on corn and put price supports for that crop on a discretionary basis. This would mean that corn would be taken out of the basic crop grouping. With no acreage allotments, all producers would be eligible for price supports at a level substantially above the market price which prevailed during the 1955 harvest season. The discretionary basis of corn support, the White House says, would be on a comparable basis with other feed grains.

A corn price support on a comparable basis with other feed grains may be estimated from the following current levels of support at 70% of parity—in dollars and cents as follows, national average basis: Oats, 61¢ bu.; barley, 94¢, and grain sorghums at $1.78 cwt. or approximately $1.01 bu.

Corn, while in surplus but not as heavily as wheat or cotton, is admittedly bogged down by the expansion of competitive feed grain production as wheat and cotton lands have been removed from production. Congressional leaders see some sense in the alternative proposal asked by the White House since it might retard further production of the competitive feed crops.

During the recent harvest corn has sold between 20 and 60¢ below the loan level. This condition has been charged to CCC sales policies, but the relatively small quantity of corn eligible for the loan program must also have been a large contributing factor.

USDA officials and congressional leaders are unwilling to go out on a limb on the corn aspects of the White House farm measure. In congressional halls it is rumored that ineligible corn loan producers may have been selling their corn to acreage-compliance corn farmers who put such corn into loan programs. Corn, it is suspected, cannot be subject to positive policing and enforcement techniques.

It is possible that if Congress can lock the door on a further expansion of competitive feed grain production, it may be content to let the corn price support program stand as is—except for the fact that the corn surplus may lead to an embarrassing price support level reduction in 1956.

MARKETS

(Continued from page 2)

ly improved this week over what it has been recently.

Cottonseed meal for the nearby position is in tight supply, with difficulty being encountered in making new purchases. Deferred supplies are in better shape, and asking prices are slightly lower. A fairly good amount of soybean meal is being offered by local oil mills for deferred shipment at attractive prices. Purchasing agents for feed mixers still show signs of caution and buy only immediate requirements.

Central States

Feed industry people who expected an important pickup in business following the turn of the year apparently are disappointed thus far. Observers say that although the buying rate is fairly steady, very little zip in trading circles is noted.

Business during the week ending Jan. 11 was fairly routine, spokesmen said. Dock business showed some increase with local manufacturers, but on the whole the order backlog stayed fairly level. Cattle feed is said to be moving at a good pace, and some starting mash business is appearing. Dairy feed is a trifle improved, but hog feeds are slow.

Looking farther into 1956, the trade appears divided as to the outlook for volume. Some observers believe tonnage will be off from 1955, stressing that hog feeds will be hard to sell. However, other manufacturers say more poultry and turkeys will help offset the hog feed dip. Prices this week were fairly steady.

Ohio Valley

Following the recent pattern, sales of formula feeds continued an upward curve this week in the Ohio Valley and were reported in better volume than in several months. The weather was a contributing factor, with ice-glazed fields making it necessary for feeders to keep all farm animals indoors. The most noticeable effect of this situation was a quite sharp increase in sales of hog feeds, with broiler feeds and egg mashes also moving out in increased tonnages.

Area feed manufacturers were pleased with a recent report that the drouth situation which has plagued valley farmers during the

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last three years apparently will be eased this year. The Ohio state water division reported more than normal rainfall during the late months of last year, resulting in a considerable rise in the underground water level and stream flow well above the median.

In recent years, many valley farmers have had to reduce the number of their farm animals because sufficient water was not available, but it now appears this handicap will not confront them this year. With ample water supplies, valley farmers will be encouraged to stock larger herds and flocks.

Formula feed prices continued steady to up 25@50¢ ton this week, and improving sales made it necessary for some manufacturers to resume second shifts in their plants. Average production was reported up to more than 70% of capacities—a high for several months.

Pacific Northwest

The formula feed trade continued quiet, with mills reporting a minimum backlog of orders, and terminal plants operating on a five-day week with no extra shifts.

Country mills which are pelleting screenings for use by dairy feeders and cattlemen report that their business is very good, and some of them are running at a two-shift rate. Indirectly, very high hay prices are disrupting the normal flow of formula feeds into dairy channels, and this is the most notable feature of the trade at the present time. Hay is being quoted at $50@53 ton, delivered, and dairymen are searching in every direction for roughage and bulk feeds which will help lower their costs in the face of these high hay prices.

Thus, consumption of grains, millfeeds, screenings, pellets and other roughage-type feeds has stepped up considerably. This in turn has cut down on the amount of formula dairy feeds which dairymen would normally feed along with their hay. No one knows how long this situation will last, but it is probable that it will continue until new crop pastures are available several months from now. Feed mills which are in position to supply roughage-type feeds are doing a booming business, but mills which are making standard formula 16% and 18% dairy feeds are suffering heavily by the shifting pattern of dairy feed consumption.

About the only turkey feeds being sold are breeding rations, and laying feeds are at a seasonal low because producers will not start expanding their laying flocks for another 60 days or so—until all danger of cold weather is past.

Grains, along with hay, are in good demand, as is millfeed. There is considerable discussion in the trade about proposed lowered freight rates on hay from Montana, but so far nothing definite has been announced.

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FAIRBURY, ILLINOIS

August 29, 1955

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Everywhere

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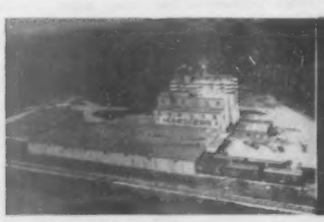
HONEGGERS' & CO., INC.

L. S. Rolf
L. S. Rolf,
General Sales Manager
LSR:HM

HONEGGER Leghorns



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